THE ORGANIZATIONAL EFFICIENCY
OF MULTIPLE MISSIONS
FOR COMMUNITY COLLEGES

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Introduction

Community colleges are complex institutions serving a multitude of constituencies with dozens of programs and activities. However, this was not always the case; community colleges (once called junior colleges) were initiated a century ago with the focused purpose of providing the first two years of a four-year college education. The concept of comprehensiveness was established in 1947 when President Truman's Commission on Higher Education encouraged the colleges to "attempt to meet the total post-high school needs of the community" and comprehensiveness has since flourished as the colleges steadily adopted more missions (cited in Bogart, 1994, p. 62). Many community college advocates argue that the constant expansion of functions is a natural outcome of the community-based mission of the colleges.

Regardless of strong institutional support for this transformation, during the past two decades academics and researchers have almost universally condemned the comprehensive model. Economists have suggested that the colleges should narrow their focus for fiscal reasons (Breneman and Nelson, 1980); sociologists have argued that the conflicting objectives of academic and vocational education reinforce class distinctions and accentuate inequality (Clark, 1960; Clark, 1980; Brint & Karabel, 1989; Dougherty, 1994); and even community college insiders have decried mission complexity, suggesting that "community colleges cannot accomplish their mission in an organizational structure where round, career-oriented students are placed into square academic holes" (Baker, 1999).

Despite this more or less constant backdrop of criticism that the colleges are sacrificing quality and falling short of promoting equity, the accretion of activities continues unabated. Some colleges have tried to maintain a particular focus on liberal arts preparation for transfer, but these are few and in most cases still offer a broad array of services. Furthermore, states, such as Louisiana, Minnesota, Kentucky, Washington, and Indiana, which had maintained separate technical and academic two-year colleges, are merging their systems to establish comprehensive community colleges. Even in Wisconsin, which continues to have separate systems, state and college-level administrators have worked to encourage technical college students to transfer to four-year schools (Wisconsin Regents Pass Plan, 2003)**.**

The list of community college missions now goes well beyond the core degree-granting programs that either lead to transfer or a terminal occupational degree or certificate. Activities now include developmental education, adult basic education, English as a second language, education and training for welfare recipients and others facing serious barriers to employment, customized training for specific companies, preparation of students for industry certification exams, non-credit instruction in a bewildering plethora of areas (including purely avocational interests), small business development, and even economic forecasting.

The first goal of this paper is to explain why, despite constant criticism, community colleges continue to pursue, and indeed solidify, an organizational form based on comprehensiveness. Drawing on organizational and resource-dependency theory, we argue that the political and fiscal environments in which the colleges operate provide strong incentives for colleges to expand their activities. The comprehensive strategy is effective from an organizational point of view. We do not conclude that this approach leads to the best education, or that it is necessarily in the best interest of the students. Researchers have debated these points for several decades (Deegan & Tillary, 1985; Ratcliff, 1994; Brint & Karabel, 1989; Dougherty, 1994; Labaree, 1997; Eaton, 1994; Cohen & Brawer, 1996; Grubb, 1996), and we have addressed these controversial issues elsewhere.[1] Our point is that, given the environment in which the colleges operate, comprehensiveness makes sense for the institution. Thus, calls for organizational simplification are not likely to be successful without changes in the incentives faced by the colleges, or at least without much more definitive empirical evidence of the disadvantages of complexity, either to the college or to the students.

In the second part of this paper, we explore one approach to increasing organizational efficiency without reducing the number of activities—improve coordination and integration of these apparently disparate missions. We conclude that such coordination is extremely difficult to achieve and that, once again, political and fiscal incentives militate against it. The costs associated with combining functions appear to outweigh any perceived benefits. Where benefits exist, they are often difficult

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[1] See Bailey and Averianova, 1998. This paper is also part of an ongoing project on the missions of community colleges that will explore the advantages and disadvantages of comprehensiveness.

to measure or data are not collected in such a way that they can be assessed. Colleges have strong incentives to expand missions, but weak incentives or even disincentives to combine them.

We end with a summary of these findings, and present some recommendations for how colleges and state policymakers and legislators should think about, and respond to, issues associated with the growing mission diversification at community colleges.

Criticisms of the Multiple Missions Strategy

Fundamentally, the critics of the multiple-missions strategy argue that by trying to do many things, the quality and effectiveness of any single activity must decrease. In some cases, analysts believe that the colleges have a particular core mission, usually academic transfer or vocational preparation, and that the energy, resources, and focus needed to carry out that mission are dissipated as other activities proliferate. Alternatively, other critics simply argue that an institution cannot do many things well. This perspective is summarized in the often-heard lament that 'community colleges can't be all things to all people.' In trying to please everyone, the colleges end up compromising their effectiveness in core areas.

Those who advocate that the transfer function should be the primary mission of community colleges have been among the most vocal opponents of this broader strategy. These critics argue that the growing emphasis on occupational education, as opposed to academically oriented transfer programs, has a negative effect on transfer rates. According to this view, vocationalism draws community college students into programs that largely do not encourage transfer. At the same time, vocationalism undermines the academic programs that do encourage transfer (Dougherty, 1994). Brint and Karabel (1989) argue that this function has shifted the entire mission of community colleges towards turning them into vocational schools for low and middle class occupations, and thus limiting students' opportunities for advancement. Clark (1960), in his classic work on the community college, suggested that the colleges played a functional role in adjusting (down) the expectations of students so that they would be consistent with the realities of the labor market. As the mission of community colleges evolved to meet a

broader range of needs, the earlier emphasis on liberal education and on the transfer function appeared to take a back seat to the newer demands, as the vocational mission "eclipsed" the emphasis on transfer and liberal education (Wechsler, 1968; Katsinas, 1994).

While these critics oppose mission expansion because it weakens the academic transfer function, others object to the comprehensive model because it detracts from what they believe should be the core function of community colleges—vocational education (Blocker, Plummer, & Richardson, 1965; Grubb, 1996). A growing number of policymakers and business leaders look to occupational education at the community college as a key site for building a modern workforce. Indeed, Leitzel and Clowes (1991) consider vocationalism to be the most important distinctive niche of community colleges within the system of higher education. Clowes and Levine (1989) argue that career education is the only viable core function for most community colleges. According to Grubb (1996), the colleges and their role in society are not served well by the continued criticism of the vocational function and a strong emphasis on transfer and academics: "One implication for community colleges is that they need to take their broadly defined occupational purposes more seriously ... They are not academic institutions ... even when many of their students hope to transfer to four-year colleges" (p. 83). He argues that: (1) the emphasis on academic education implies that there is only one valued postsecondary institution, defined by the research university; (2) community colleges cannot win the academic battle because they are not selective; and (3) community colleges mostly fail in large transfer numbers, therefore their clientele is left with outcomes of uncertain academic value.

Another argument against a comprehensive strategy is more general—community colleges simply cannot do everything well and therefore must choose a more limited set of objectives on which to focus. As Patricia Cross (1985) asked, "can any college perform all of those functions with excellence—or even adequately in today's climate of scarce resources and heavy competition for students?" (p. 35). After predicting growing fiscal pressures on the colleges, Breneman and Nelson (1980) similarly argued that the "most fundamental choice facing community colleges is whether to emphasize the community-based learning center concept, with an emphasis on adult and continuing

education and community services, or to emphasize transfer programs, sacrificing elsewhere if necessary ... It may no longer be possible to have it both ways" (p. 114). This perspective probably owes something to the argument that businesses must focus on their core competencies. Indeed, the successful for-profit institutions of higher education have tended to pursue a much more focused strategy. For example, the University of Phoenix concentrates on educating adult, working students and does not try to serve the eighteen-year-old, "traditional" college population. DeVry Technical Institute specializes in a small number of technical degrees and simply does not expect to enroll students interested in majoring in the humanities, the social sciences, or even the physical sciences.

Levin (2001), in his recent study of community college missions, regards the comprehensive mission of community colleges as inevitable by recasting their broadening institutional identity as a process of globalization. Levin rejects the institutional identities put forth by both critics and advocates mentioned here, arguing that community colleges are neither traditional (as defined by Cohen and Brawer, 1996) nor entrepreneurial (as defined by Grubb, et al., 1997). In fact, Levin (2001) argues that, when the definition of community expands beyond the local level, as it does with the introduction of new technologies, the broad mission of community colleges will allow them to become "boundary-spanning" organizations, leading ultimately to the obsolescence of "traditional institutional boundaries, such as the identity of the community college as a two-year institution" (p. 180).

What are the Missions of Community Colleges?

Defining the missions of community colleges is no simple task. The most commonly accepted typology of missions is based primarily on curriculum. These missions include: 1) collegiate education or academic transfer; 2) career education or vocational-technical; 3) remedial or developmental education; 4) community service; 5) continuing education; and 6) general education (Cohen & Brawer, 1996, p. 24). However, this typology is deceptively simple. In fact, the programs incorporated under each heading can differ dramatically from one institution to another and from state to

state, so that one can quickly run into difficulties trying to disaggregate a school's missions.

Since much of higher education is occupationally oriented at both the community college and the university levels, even a simple attempt at categorization such as separating academic transfer and vocational programs can raise some thorny issues. Business degrees make up approximately one-fifth of all baccalaureate degrees awarded by public universities (Snyder & Hoffman, 2000, Table 249, p. 281), leading community colleges to offer programs in areas such as accounting and administration in both technical (or terminal) and transfer modes. At the same time, technical education can fall under the heading of continuing education, depending on other characteristics such as whether the course is credit or non-credit, and whether its students are to be first-time college goers, students returning to college, or even baccalaureate-holders seeking specific skills in community college occupational classes. The community service mission, traditionally comprised of avocational classes, is an area where community college involvement is perceived to be waning. Nevertheless, this is certainly not true of non-credit developmental classes such as those in English as a second language, adult basic education, contract education, or job-related non-credit instruction.

In this paper, we use a simplification of a typology developed by Patricia Cross (1985). She identified five themes characterizing the debate about community college missions that continue to shape today's discussion of missions. These include the comprehensive, vertical, horizontal, remedial, and integrated foci. We modify this scheme to use three categories, which we refer to as the core, vertical, and horizontal activities.

The core is comprised of degree-granting programs that, either lead to an academic associate degree, transfer to a four-year college or university, or a terminal occupational degree or certificate. We also consider remediation to be part of this core function since developmental education, in most colleges, is designed explicitly to prepare students to enter those degree-granting programs.[2]

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[2] We realize that this is a simplification. In many colleges, developmental education is organized separately from the core programs with a distinct faculty (see Perin, 2002). In addition, many students who start in remedial courses never make it to degree programs (see Grubb, 2001). On the other hand, many colleges integrate developmental education more with degree programs.

Much of the controversy about the missions of community colleges has focused on the distinction between the two core functions of the colleges: the transfer and terminal occupational missions. However, in this paper, we also focus on the proliferation of activities outside of these core degree-granting programs.

Outside of the core, community colleges are engaging in vertical and horizontal expansion. The concepts of horizontal and vertical missions are rooted in resource dependency theory (Pfeffer & Salancik, 1978), which argues that mergers of companies are a strategy used by organizations to control their external environments. This control involves both the presence of competition and the flow of resources, financial and otherwise. The development of comprehensive missions has similar implications for community colleges. Vertical expansion can be used to improve the flow and quality of incoming students and ensure that college outputs in the form of transfer students and workers are in demand. Horizontal expansion, on the other hand, has the advantage of diversifying a college's market niche and revenue streams. Since students are the primary resource of community colleges, this can provide greater stability, reducing the impact of enrollment fluctuations. Both expansion strategies embed the colleges in their local and regional environments by developing and strengthening their ties to a broader cross-section of stakeholders. Since community colleges lack an exclusive niche in education, building interdependencies with stakeholders is another way of securing resource flows.

The goal of the vertical mission of community colleges is to "push or pull students through the traditional system," hence the focus of this mission is the traditional college-aged student (Cross, 1985, p. 38). In the 1990s, this mission has received a great deal of attention at the federal level through the School-to-Work and Tech-Prep initiatives. At the state level, articulation between two- and four-year institutions has received considerable attention in states such as California, Texas, and North Carolina. Finally, the vertical mission at the state and local level is represented by the proliferating dual enrollment or credit-bearing transition programs (Bailey & Karp, 2003), which allow high school students to earn college credits through joint programs with community colleges.

The horizontal mission of the colleges involves reaching out to the community through a diversification of educational and other types of community-oriented services,

rather than reaching up and down into the traditional educational system. The horizontal mission includes not only activities in non-credit contract training and continuing education, but also the many grant and privately funded programs and centers run by the colleges. These include small-business development centers, off-campus GED and ESL classes, and summer camps for children, to name only a few.

Research Design

Our research design involved multiple case studies in which we repeated our data collection at each of eight sites as a way of identifying themes through the replication of findings (Yin, 1984). Case studies of the eight community colleges were conducted between August 1998 and November 1999. The findings in this paper are drawn from research on institutions located in five states: two colleges in each of California, Texas, and Florida, one in Massachusetts, and one in New York. The characteristics of these colleges are listed in Table 1.

Table 1: Background Characteristics of Colleges and Universities

College	State	Location & Campus Type	Single or Multi-campus	Fall Enrollment*	Percent White/non-Hispanic*
#1	CA	Urban	Multi	27,986	28.9
#2		Suburban	Multi	22,978	18.2
#3	FL	Urban & Suburban	Multi	17,319	62.7
#4		Rural	Single	2,076	75.9
#5	TX	Urban & Suburban	Multi	25,968	71.4
#6		Rural	Single	3,686	67.9
#7	NY	Urban	Single	10,384	30.5
#8	MA	Urban	Single	6,474	62.7

*SOURCE: IPEDS, 1999, National Center for Education Statistics

For the selection of our sites, we concentrated on the 1) state policy context; 2) degree of urbanicity; and 3) comprehensiveness of program offerings. In terms of state policy, we intentionally sought more than one community college in the three states of Florida, Texas, and California. These states alone enroll over one-third of all community college students in the country. We also pursued a stratification of schools between urban and non-urban locations in each of the states, as a way of studying institutions subject to different local political and economic pressures. Finally, in seeking community colleges that were comprehensive, we used the Integrated Postsecondary Education Data System (IPEDS) and college catalogues. We sought a presence, though not necessarily an equal emphasis, in our five broadly conceived educational areas of transfer, terminal vocational, continuing, contract training, and pre-collegiate education.

The primary sources of data for this study were interviews with administrators, faculty, and some students at each institution. In total, 271 individuals participated in the study, including 162 administrators (60%), 85 faculty (31%), and 24 students (9%). Approximately one-third of the interviews included more than one person, particularly where faculty or counselors with similar areas of expertise were involved. Interviews were semi-structured and conversational (Lee, 1999; Weiss, 1994), allowing the interviewers to incorporate specific questions while retaining the flexibility necessary to pursue predetermined and emerging themes. This flexibility was necessary to support the exploratory purposes of the study.

Data were analyzed using QSR NUD*IST software designed specifically for the purpose of management and analysis of qualitative data. This software provides an efficient and flexible tool for carrying out basic exploration of interview data as well as the more complex tasks of developing and testing theories and hypotheses generated by the researchers. A total of 58 nested codes were used to identify college missions, programs, and roles. We identified two categories of outcomes that would answer our research questions. Emphasis referred to the extent to which the college engaged in a particular mission (12 codes) and cohesion referred to the extent of integration between missions (9 codes). Each of these was studied essentially according to the dimensions of structure, facilities, funding, and student enrollment trends. We sought explanations for mission emphasis and cohesion originating both internally and externally to the colleges.

These areas were captured by 19 and 21 codes respectively. Additional codes were used to identify each case and the organizational role of the informant.

Vertical Expansion

The general mission expansion strategy for each of the colleges is shown in Table 2. All of the community colleges in our study had numerous programs both operating, and in development, to strengthen their relationships and connections with high schools and with four-year colleges—we refer to this as vertical expansion. Much of the vertical expansion at the colleges in this study is occurring in programs enrolling high school students, including dual or concurrent enrollment programs and Tech-Prep. While Tech-Prep is a federally funded program aimed at streamlining technical education, dual enrollment is conceptualized much more broadly and encompasses a variety of programs enabling high school students to simultaneously enroll in high school and college. Such programs are one of the fastest growing activities at community colleges.

Table 2: Colleges by Involvement in and Expansion of Selected Missions Based on Interviews with Presidents and Senior Administrators

	California		Florida		Texas		New York	Mass.
College	**#1**	**#2**	**#3**	**#4**	**#5**	**#6**	**#7**	**#8**
Mission								
Horizontal								
• **Contract education**	✓E	✓	E		✓E	✓E		✓E
• **Continuing education**	✓	✓	✓	✓	✓E	✓E	✓	✓
• **Welfare/WIA**	✓	✓	no	✓E	✓	✓	no	
• **Business Incubators**						✓		✓E
Vertical								
• **K-12 programs**	✓	✓E	✓	✓		✓E	✓	
• **Honors programs**	✓	✓	✓	E	✓	E	✓	✓E
• **Baccalaureate degree**				E				

Key: ✓ = involvement   E = expansion planned
"no" = avoidance   blank = not present

Community colleges have received funding for Tech-Prep throughout the 1990s, and some college administrators have seen it as an opportunity to recruit high school students who might otherwise not go to any college or perhaps to a four-year school. We did not emphasize Tech-Prep in our interviews because it has been studied extensively already (Orr, 1999; Silverberg, Haimson, & Hershey, 1998). Our interviews did not suggest that Tech-Prep continues to be seen as a major source of new students. Moreover, while many high school students do enroll in courses that are articulated with community college programs because of Tech-Prep funding, research has not shown that Tech-Prep has generated significant numbers of new students for community colleges. Tech-Prep has been anchored more in the high schools than in the community colleges (Orr, 1999; Silverberg, Haimson, & Hershey, 1998).

In contrast, dual enrollment programs are growing rapidly—"snowballing" as one administrator put it—and enjoy enthusiastic support from community college administrators. Many colleges have enrolled hundreds of high school students, and, in some cases those enrollments have increased dramatically in just a few years. For example, staff at two of the colleges in our sample stated that dual enrollment students comprised over ten percent of the credit-student population. In Florida, for example, the community colleges hire high school teachers to teach college courses in the high schools. Students in this program can earn up to 24 college credit hours prior to graduation. The program at one of our Florida sites partnered with 28 high schools and enrolled over 3,000 students.

One important impetus for dual enrollment initiatives has to do with the logistics of swelling high school enrollments. For example, at one college in Texas, the local school districts had contracted with the college to take on large numbers of students. We were told at this college that, two to three years earlier, the school district had arrived at the realization that the community college could educate their students at a lower cost than the district. As a way of dealing with enrollment growth, the K-12 district opted to pay for tuition and books for qualifying students to take between 15 and 30 credit hours at the community college. In another case, the college benefited from the relationship because they could expand their enrollments, even though their own facilities were full, by conducting classes at the local high schools. The colleges benefited through the state

per-student reimbursements that provide them with buffers in the event that regular college enrollments sag.

College administrators, especially financial officers, are very enthusiastic about these efforts. Most of the offerings are in the social sciences and humanities and therefore do not need expensive equipment. Often, as in the colleges we studied in Florida and New York, the courses are taught at the high schools and therefore do not require additional space. The instructors for courses taught at the high schools are usually adjuncts or high school teachers, who are certified (essentially through their educational credentials) to teach college-level courses. The colleges therefore incur extremely low costs and are often reimbursed at the regular FTE rate. The students can usually earn *both* high school and college credit.[3] So far, little is known about what happens to these students, because colleges do not identify them in their systems. Although some administrators hope the students will eventually end up enrolling in the college, many faculty and administrators we spoke with agreed that dual enrollment attracts the type of student who would otherwise go directly to a four-year college. In other words, these students represent a previously untapped market.[4] From the perspective of community colleges, enrolling high school students affords them both the opportunity to increase their enrollments (FTE), which forms the basis for state funding formulas, while at the same time marketing themselves early to high school students.

Dual enrollment also represents an opportunity for community colleges to build relationships with local schools and parents, yielding political benefits that do not necessarily involve increased enrollments. For example, at one college, administrators developed their dual enrollment system explicitly to strengthen their tax base. In this case, administrators had to convince local taxpayers, on a district-by-district basis, to approve funding for the community college. Thus, the college particularly tried to develop dual enrollment programs in districts that had not approved this taxation.

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[3] A distinction needs to be made between dual enrollment and dual credit. Dual enrollment means that a student is simultaneously enrolled at a college and a high school. Dual credit, on the other hand, means that a student may be able to transfer high school credits to college once accepted by a program. Dual credit is often associated with Tech-Prep.

[4] Other institutions are beginning to take notice of this market. Administrators at one college (not included in this study) said that the community college, the local four-year public university, and two private not-for profit colleges were all offering courses in one local high school.

Administrators hoped that by building an enthusiastic following among parents with strong college aspirations for their students, those districts would be more likely to provide tax revenue for the college.

Vertical expansion efforts were also present in many of the colleges that we studied. Articulation with four-year colleges is the most common and, indeed, the most logically considered part of the core activities of the college. Several states continue to work on developing common course-numbering systems and other initiatives to simplify and facilitate transfer from community colleges to four-year colleges and universities.

However, community colleges have engaged in vertical expansion beyond the traditional transfer and articulation policies. The development of applied baccalaureate programs at community colleges is one of the most controversial trends. Several of the colleges in our sample were actively considering the applied baccalaureate. At a rural community college, far from other institutions, the administrators believed the applied baccalaureate program would expand access to bachelor's degrees for local residents who might have trouble commuting to the nearest four-year college or university. Others argue that community colleges have a unique approach to applied teaching and student services that could also be applied to upper-division instruction. Not to mention the fact that community colleges already offer general education classes as well as the substantively specific courses offered through professional schools or departments. Finally, community college staff recognize that the share of students who have baccalaureate aspirations is growing, and that community colleges need to respond more directly to that student demand.

Nevertheless, many community college administrators and faculty remain skeptical about these initiatives. Some presidents argue that if community colleges start offering four-year degrees, then their commitment to open access may be weakened. The differences in the conditions of employment of faculty at two- and four-year colleges may also pose a problem to this vertical expansion of the community college mission. Will community college faculty working in four-year programs still be willing to teach the typically much higher community college load?

Although the applied baccalaureate definitely remains controversial, the movement does seem to be gaining some momentum. Many states are responding to this

growing interest. For example, the Utah Valley State College started out as a community college and now offers baccalaureate degrees. The community college applied baccalaureate is on the brink of legislative approval in Florida and is being tested with regard to teacher preparation at a college in Texas. The basic idea of the applied baccalaureate has already been tested at Canadian community colleges, several of which offer applied baccalaureate degrees. This development in the U.S. will likely gain more support in the future, as advocates of the change have now formed the Community College Baccalaureate Association, which, in the spring of 2001 had 63 members from 21 states and 5 Canadian provinces (Walker, 2001).

Honors programs were one of the most consistent upward expansion efforts of the colleges in our study. At the time of our field research, honors programs were present at six of the eight colleges, and under development at the remaining two. Little is known about how many community college honors programs exist nationwide, but one estimate is that they are present at about 36 percent of community colleges (Outcalt, 1999). According to Outcalt's (1999) study, honors programs are more likely at larger colleges, those with higher proportions of transfer courses, and those with lower percentages of minority students and students in remediation. Of the colleges in our study, the two that only recently added honors programs were small colleges in rural, isolated locations. This suggests that community college honors programs may be expanding beyond their traditional range.

College counselors observed that honors programs help to recruit or retain students who feel they will get a more rigorous education at a four-year school, but the numbers are still small. At one college, the director of the honors program regularly takes the parents of promising high school students out to dinner as a way of wooing them away from the public university. However, averaging around 30 students on each campus, the honors programs were but a tiny portion of the enrollments in degree programs at the colleges. Nevertheless, the importance of honors programs goes beyond these small numbers. These programs were highly visible and well regarded by faculty and administrators alike, despite their small sizes. The programs help to strengthen the collegiate image of the institution both internally and externally.

Thus, the purposes of these vertical programs are threefold. First, they may attract better-prepared students to the community college. Second, and more importantly, being able to place students at the university and have them keep most of their credits can strengthen the status of community colleges. And third, in terms of state economic development initiatives, streamlining public postsecondary education can put community colleges at the center of state policies designed to "keep the best and the brightest within the system" (College #8, Asst. VP Academic, 10/22/98). This ensures that community colleges retain an important role in postsecondary workforce development policies.

Horizontal Expansion

Although the efforts at vertical expansion are attracting enthusiasm and controversy (for example, through dual enrollment and the applied baccalaureate), horizontal expansion is much more significant with respect to both numbers of students and revenues. Horizontal expansion involves the development of postsecondary educational programs outside of the core degree-granting areas. Although these activities might enroll students without high school degrees or students with baccalaureate degrees, the programs do not involve institutional relationships with high schools or four-year colleges, nor do they involve provisions for earning credit in four-year schools. These programs include non-credit continuing education, avocational instruction, and contract training, but also extend to initiatives such as running small business development centers or Workforce Investment Act (WIA) consortium partnerships.

In terms of headcount (not FTEs), non-credit enrollments at some colleges often surpass credit enrollments. According to the National Household Education Survey (NHES), in 1995 over 5.4 million students were enrolled in job-related and personal development non-credit courses in two-year community colleges and public two-year

vocational schools nationwide. These were about evenly divided between job-related and personal enrichment courses (Bailey et al., in press). During that year, about 7.2 million students were enrolled in credit-bearing courses in those institutions. However, the credit and non-credit populations differ demographically in that non-credit students are older and are much more likely already to have postsecondary degrees.[5]

Community college revenue data give another indication of the significance of horizontal expansion. Core degree-granting programs are funded by state and local appropriations and by student tuition. Programs outside the core are funded by student tuition and fees, but also by grants and contracts both from the public and private sectors. In 1980, 53 percent of all college revenues were accounted for by state revenue. But by 1996, the state share of revenues had dropped to 34 percent. The share of local revenues also fell slightly from 17.3 to 15.6 percent. In contrast, the revenue share accounted for by state and federal grants and contracts grew dramatically from 1 percent in 1980 to 18 percent by 1996 (Merisotis & Wolanin, 2000).

Over the last decade, many community colleges have increased their work with local business and industry through partnerships and customized training contracts (Dougherty & Bakia, 2000; Grubb et al., 1997). The colleges in our study also followed this pattern. Six of the eight colleges were actively involved in building programs that were either specifically requested by businesses or part of local economic development plans. At one of the remaining colleges, contract training was not a viable option because, with a local industry base of agriculture and small business, there was no demand for it. This college had a strategy of developing programs of use to welfare students, in conjunction with WIA and the local Workforce Investment Board. The business strategy of the remaining college did not extend beyond the core missions for two reasons. First, there was intense competition for contract and continuing education students; and second, because the college is in a system that charges a 17.5 percent overhead on income generated through contract and continuing education.

College administrators frequently hoped that contract training and continuing education would generate additional revenues. It was relatively easy to calculate the revenue attributable to these activities, but most colleges did not have good measures of

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[5] Calculations from NHES by the authors.

the *net* revenue that programs generated. When such calculations were made, fixed costs for space, real estate, and administrative overhead were not included. Moreover, given the enthusiasm for these programs, it is perhaps surprising that the *gross* revenue generated by the programs is almost always well below ten percent of total revenues and often below five percent (Dougherty & Bakia, 2000).

There are several reasons why the importance of non-credit programs exceeds their contribution to college revenues. For example, although the revenues for non-credit activities may be small, in many cases the president and the administration have more discretion over the use of these funds than they do over the regular state and local appropriations. Discretionary funding can be used for capital investment or for entrepreneurial ventures that test the waters with new programs. Indeed, since state allocations for capital investment have not been able to meet the demands placed on the colleges by rapid technological developments in the past decade, contract training is often a viable source of equipment and facilities for community colleges. Companies will donate used equipment to colleges, although this means that the equipment used for teaching may be out of date. Cisco Systems is an example of a company that has provided community colleges nationally with significant contributions of computer equipment in exchange for training potential employees. Most donations are made by businesses that are central to local and regional economies. It is worth noting that while many companies have been forthcoming with equipment, few will offer colleges money except when it is tied to customized programs.

Lack of start-up funding or a state's blessing to introduce a new program no longer presents a barrier when businesses or grantors pay for start-up costs, especially when college credit is not a concern. One of the Texas colleges in this study was asked to provide a training program for railroad engineers with only five weeks lead-time. The railroad company provided equipment, an instructor, students, and a higher level of reimbursement than the state. Since the college would act only as a "broker," providing nothing more than the facilities and administration of the program, the president readily "agreed to do business as it was going to be that way" (College #5, 2/26/99). Of course, a relationship such as this one raises the obvious question of what role the college is actually playing in providing contracted services.

Aside from equipment and facilities, another valuable resource that grant and contract programs may provide is new populations of students.[6] Since community colleges serve a broad spectrum of students, whether the target population of a horizontal program is welfare mothers or incumbent workers, these are potential recruiting opportunities for the credit programs. Although the colleges were rarely able to give us actual evidence of the number of students moving from one program into another, there was general agreement on the part of administrators that reaching new populations through horizontal expansion provides positive advertising for the college credit programs.

Student movement between horizontal functions and the core is often thwarted by the students' weak academic skills. Indeed, one advantage of non-credit programs is that students can enroll even if they fail, or would fail, assessment tests. (In some states, matriculation in credit courses is limited or blocked for students who fail one or more assessment tests.) Faculty and administrators associated with the horizontal missions told us that when students are entering programs with specific, short-term objectives such as finding employment, placement in developmental education in order to be eligible to enroll in credit courses may deter them from attending the college altogether. Thus, we found evidence that community colleges sought ways to take technical certifications out of the traditional core degree modes and put them into continuing education when possible. For example, at a Florida college, a car electronics program was designed as an Associate of Science (AS) degree but never got more than six to eight students at a time because "the students don't want to take all the degree requirements, they don't want to spend a lot of time in remedial English, remedial math, these kinds of things. They want training" (College #3, Campus president, 9/8/98). As a result, this program was shortened from a degree program to a certificate program. At the time of our study, this was a significant change, because certificate programs in this state did not articulate to the degree programs.

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[6] Similar findings have been reported in an analysis of the development of contract education at community colleges. See Dougherty and Bakia (2000) for a detailed discussion of contract training as a source of equipment and students.

With regard to vocational programs in particular, horizontal expansion may be more attractive to community colleges than expansion within the core vocational programs because it maximizes curricular flexibility. College faculty and administrators cited red tape, time loss, and expense as reasons to avoid starting new degree programs. At a college in Texas, for example, the chair of the construction trades department reported that companies often ask for ten hours of training, but that by law the credit programs in his department must provide 16, 32, or 48 hours. This poses a problem for companies training incumbent workers because the companies obviously do not want to lose workers for unnecessarily long lengths of time (College #6, Construction Division Chair, 6/28/99). Certificate and continuing education programs, on the other hand, require less scrutiny at the state level, and those programs that are non-credit generally require no state approval at all. One of the colleges in this study won a long-term contract with a global corporation to train thousands of students yearly only by agreeing to operate courses without state funding. The president of this college observed that, although it seemed "crazy" to do workforce development in a mode that would not receive state aid, this enabled them to "not have to have any of the strings attached or any of the time that it takes to respond" (College #6, 6/27/99).

Institutional constraints surrounding curriculum development make horizontal expansion more attractive to the colleges. Community college programs that are non-credit operate outside of traditional faculty governance systems; therefore, curricular changes need not involve obtaining the approval of faculty through a curriculum committee. Vocational faculty told us that, overall, curriculum committees at the colleges did not reject new programs. Rather, it is the time-consuming process of filling out forms and obtaining signatures that makes it difficult to keep pace with changes in industry. In general, this problem seems to be exacerbated by the development of high tech industry, which has emphasized flexibility and established the need for programs of study that are difficult to explain to non-technical faculty.

Constraints on facilities create another hurdle to the expansion of the core activities. The colleges participating in this study were often filled to capacity during the mornings and evenings but were otherwise underutilized. We found that full-time community college and university faculty alike were reluctant to adopt non-traditional

schedules that might allow their colleges to operate at times when the campuses are underutilized. Faculty at one college in the study apparently would not work in the afternoons regardless of long waiting lists for courses. This was a particularly large college with a strong union presence, in which over 90 percent of the college's expenditures were spent on instruction. An administrator observed that utilizing the college campus during afternoons "would make a big difference," but that "if there's not an institution-wide commitment, then it won't work" (College #1, Executive Vice Chancellor, 4/12/99).

In addition, community college presidents believe that horizontal programs bring important political benefits to the college as a whole. Contract training, or specialized non-credit training for particular businesses, are methods through which the colleges can strengthen their support from important local and state level constituencies.[7] When asked why the president of a college put so much effort into the non-credit workforce development programs even though they represented just over five percent of the school's budget, one vice president observed that these programs are the most "public face" of the college to our local community. Another president acknowledged that the college lost several hundred thousand dollars a year by operating a performing arts center. Nevertheless, the cost was worth it because the center brought thousands of local residents to the campus every year (College #6, 6/27/99).

Causes of Mission Expansion

In our discussion so far, we have highlighted some of the factors that have motivated colleges to take on more missions. In this section, we will pull those arguments together and locate them in a broader conceptual framework and an understanding of the context in which the colleges operate.

An understanding of the fiscal and political environment in which community colleges operate is the key to making sense of their behavior. Community college finance is extremely complex and in any case, varies from state to state, although some generalizations can be made. The majority of college revenue depends on enrollments,

both from direct tuition payments and from state and local reimbursements that are linked to enrollments. However, the association between enrollments and final revenue is dependent on a highly political process. Tuition levels are set or at least approved by state and local legislators, and state and local legislators and policymakers set the level and the characteristics of enrollment-based reimbursements. In some cases, local funding is based purely on property values and is independent of enrollments. Moreover, as state expenditures on higher education shrank during the first years of the decade, state governments often cut the link between enrollments and reimbursements, simply increasing, or sometimes decreasing, reimbursements by a given percentage regardless of enrollment. Community college budgets therefore must be considered in the context of overall state and local priorities. One of the advantages of some non-credit fees, contracts with businesses, and direct grants from federal or state governments or from private sources is that the revenues do not interact with state or local legislatures.

Changes over the last ten to fifteen years in the environment in which the colleges operate have had important effects on college enrollments and revenues. During the 1990s, state funding priorities shifted away from higher education as prisons and health care accounted for larger shares of state budgets; the share of state budgets going to higher education shrank from 12.2 percent in 1990 to 10.1 percent in 2000 (National Association of State Budget Officers [NASBO], 2000). For example, like many state systems, the California public higher education system went through a severe budget crisis early in the decade, and while the economic recovery brought some improvements to state universities and colleges, improvement did not keep pace with overall economic growth. And, as the economy faltered in the first years of the new century, higher education budgets again came under extreme pressure.

Moreover, within the public state systems, community colleges must provide an education with fewer resources than their four-year counterparts. For example, in the 1999-2000 school year, instructional expenditures for public community colleges stood at $3,913 per full-time equivalent student, compared to $7,126 for public colleges and universities (NCES, 2002, Table 242).

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[7] Dougherty (1994) argues that colleges increased their vocational offerings for political reasons and to maintain public revenues.

Changing expectations about educational attainment will also influence community college enrollments. Increasingly, students state that they expect to earn a bachelor's degree. In 1982, 58.3 percent of all high school seniors stated that they either probably would attend college directly after high school. By 1992, that share rose to over 76.6 percent (NCES, 1999, Table 148). Baccalaureate aspirations rose even among students enrolled in community colleges. In the early 1980s, about 45 percent of such students stated that their objective was to earn a BA, while in the early 1990s, 70 percent had that goal (Schneider & Stevenson, 1999). As students focus more on earning four-year degrees, we would expect to see enrollments shift towards four-year colleges. Indeed, total enrollments in these institutions did rise between 1995 and 1998 while community college enrollments were stable. And the NCES projects that four-year enrollments will grow faster over the next decade than two-year enrollments (NCES, 2003, p. 101). Thus, maintaining the viability of the transfer mission of the community college has become more difficult. The growing interest in vertical expansion can be partly explained by this development. Honors, dual credit programs, and applied baccalaureate degrees all are designed to attract students who might tend to enroll directly in four-year schools. Rising tuitions at public four-years may also help to draw transfer students to community colleges.

Over the last two decades, the institutional landscape of higher education has changed significantly. Other institutions, including public and not-for-profit four-year colleges, community-based organizations, for-profit companies, in-house company trainers, and even other community colleges compete with the colleges in every function that they carry out. Many public four-year colleges have expanded their continuing education offerings, sometimes even offering full degrees in an attempt to reach the type of adult and part-time students who have traditionally been served by community colleges. For-profit companies are offering short-term training, preparation for technical certifications and full degrees at several levels. In the last few years, for-profit educational institutions, such as the University of Phoenix and DeVry Institute, have attracted significant attention as potential competitors. These institutions appear to have been able to attract adult students with strong occupational objectives. In the past,

community colleges have prided themselves on being able to meet the needs of precisely these types of students.

Given the restricted resources available to colleges and the resulting constant search for revenue, the political nature of state financing systems, and the higher education regulatory environment, it is not surprising that almost all community colleges are eager to take on more activities and reluctant to shed old functions.

First, many community college experts and administrators have argued that a wide variety of program offerings under one roof is exactly what community college students need. According to this view, community college students often have ambiguous or unrealistic educational goals. If properly guided, these students can take advantage of the varied offerings as their interests change and as they converge on goals that better match their interests and skills. In these conceptualizations, it is argued that community colleges should further develop their comprehensive missions so that students have whatever support they need in order to move into gainful employment, regardless of whether that support involves general education, skills training, or student support services (Gleazer, 1980; Baker, 1999; Vaughan, 1985).

Second, new programs are believed to generate surpluses, and if the institution has any excess capacity (which many did have in the 1990s after a period of stable or falling enrollments), then the programs can be mounted at low marginal costs. Even small surpluses from programs can provide presidents with discretionary funds when most of the revenues from the core credit programs are dedicated to faculty salaries and other fixed costs. As state funding becomes more uncertain, these alternative sources of revenue appear more attractive. This development can be seen in the dramatic growth of the share of college budgets accounted for by state and federal grants.

Moreover, it is not surprising that, in search of new revenues, institutions will seek new markets rather than trying to increase their market share in old activities. For example, attracting more transfer students with BA aspirations would require the college to recruit students who previously did not enroll despite the presence of the transfer program. This might seem particularly difficult, especially as four-year colleges are trying to attract the same students. Exploiting under- or un-served markets seems to be easier than increasing market share in mature markets.

Third, community college administrators have much more flexibility when they operate outside the state-subsidized core activities. Thus, horizontal expansion can be used to explore new markets, try out new courses, and reach out to non-traditional students for whom the traditional academic schedule is not convenient.

Fourth, as we have seen, critics of community colleges argue that new activities cause colleges to lose focus and therefore weaken their current missions. In the past, the most common of this type of argument was that the growth of terminal occupational programs weakened the academic transfer mission, but more recently, critics have also argued that non-credit courses and other examples of horizontal expansion have weakened the core degree programs. Most community college administrators reject this notion. Moreover, most college administrators do not have a clear idea which activities, if they had to stand on their own, could provide a strong financial and political foundation. Most colleges do not keep data or records in such a way that they could evaluate the extent of cross-subsidies or the negative (or positive) effects of one program or function on others. While it is easy to count new revenues as students enroll in new programs, it is much more difficult to measure the costs, especially the strain on infrastructure and the attention of administrators, of those new programs.

Furthermore, despite the logic of the argument that one institution cannot do many things well, the critics of the comprehensive strategy have not been able so far to provide a definitive empirical measurement of the benefits of simplification. For example, it is simple to demonstrate that graduation and transfer rates are low, but it is much more difficult to establish that they would be higher if some missions were eliminated. Furthermore, some preliminary research on the organizational effectiveness of two-year colleges suggests that effectiveness measured in terms of cultural characteristics might be improved in more complex community colleges (Smart & Hamm, 1993).

Finally, given the political nature of college financing, trying to understand the financial benefits of particular programs by focusing on the direct costs and revenues associated with those programs is misleading. The fundamental point is that an activity can have political benefits that may generate revenue and resources for the college as a

whole, but not for that particular activity. Thus, a money-losing program may result in a stronger financial position for the college as a whole.

Political factors may make college presidents reluctant to shed programs, while at the same time creating incentives to take on new ones. New programs have the potential to create new constituencies that in turn generate the state- and local-level political support needed to maintain the flow of tax revenues. Even if a new program outside of a college's traditional activities loses money in an immediate sense, it may create a political environment that leads to additional reimbursements from the state, county or local government for the core activities.[8] Therefore, a college must not only provide a valuable service to its "customers"—current and potential students—but must also appeal to politicians, taxpayers, and influential constituencies such as business leaders and community groups.

It is not surprising that colleges have continued to move towards a more comprehensive strategy. Shedding programs risks losing visible enrollments and political support in favor of an abstract goal of focused organizational efficiency, which, though logical, lacks definitive empirical measurement and evidence.

Mission Diversification and Integration

Although community colleges are aggressively pursuing horizontal and vertical expansion, the educational substance of these new endeavors is at least potentially related to the colleges' traditional core activities. Presumably, this is one reason why the colleges choose to take on those new missions. For example, a college might take their information technology programs and offer them in a variety of modes, such as degree programs, credit certificate programs, industry certification (such as Cisco or Microsoft), and two-hour workshops. In principle, searching for this type of complementarity or synergy among programs seems to make sense—rather than having programs compete with each other for energy and resources, new programs would build on, and perhaps reinforce, existing programs. By sharing some of the fixed or administrative costs, a new

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[8] For example, one of the reasons that a community college visited by the authors in 2001 (not as part of this study) had introduced a dual enrollment program with local high schools was to build political support among local taxpayers for additional local revenues. For a detailed discussion of how this plays out in contract education, see Dougherty and Bakia (2000).

program, might actually lower the per-student cost of the traditional programs.[9] It seems logical that if the colleges are going to take on so many new functions, at least they ought to make sure that whenever possible, the functions work together effectively. Thus, we expected to find that community colleges in our study would be carrying out a process of diversification that essentially involved repackaging preexisting programs, a practice that would require some level of integration between missions.

Our study focused on mission integration across three different dimensions. Integration was understood to be a spectrum, spanning from the total separation of any two missions to their complete integration. First, we looked at the use of personnel in terms of the faculty and administration of distinct missions. For example, were the colleges' full-time faculty also teaching contract or continuing education classes? How is the college organized in terms of the division of labor between core, horizontal, and vertical missions? A second dimension involved the financing and facilities of programs. Along these lines, we wanted to know the ways in which missions directly or indirectly subsidized one another. Finally, we asked questions about students. Do students from different missions sit together in class? Do students starting at a college in one mission sometimes flow into another?

We found that most of the repackaging of programs at the community colleges in this study was largely symbolic. In reality, little knowledge sharing occurs across programs because each has its own faculty, facilities, and curricula. In most cases, even at the most general level, horizontal missions do not share an administrative structure with the vertical and core missions. As a result, rather than the efficient use of resources implied by the repackaging concept, programs are generally duplicated. Patterns of integration and duplication are shown in Table 3. In general, the core missions are likely to be integrated with one another but not with others. Horizontal and core missions are

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[9] For a more detailed discussion of the potential complementarity among programs, see Bailey and Averianova (1998).

Table 3: Extent of Integration by Mission

	Academic	Vocational		Remediation	Continuing Education	Contract Training	Adult Education
		Transfer	Terminal				
Vocational							
• **Transfer**	often						
• **Terminal**	sometimes	often					
Remediation	sometimes	sometimes	rarely				
Continuing Education	rarely	rarely	sometimes	rarely			
Contract Training	rarely	rarely	sometimes	rarely	sometimes		
Adult Education	rarely	rarely	sometimes	sometimes	rarely	rarely	
Community Service							
• **High School Programs**	sometimes	often	often	rarely	rarely	rarely	rarely
• **Small Business Dev.**	rarely	rarely	rarely	rarely	rarely	rarely	rarely

Key
Often = Often integrated
Sometimes = Sometimes integrated
Rarely =Almost never integrated

more likely to be integrated when they require college credit. Thus, Table 3 shows a number of relationships that are marked as "sometimes" integrated. This integration may occur in continuing education and contract education, depending on state regulations regarding how continuing education credit is handled. Often there are college-level differences resulting from the industry that is served. For example, students in information technology classes may only be interested in industry certifications rather than credit; whereas the national construction trades association, Associated Builders and Contractors, shaped their curriculum around accruing college credit. The impact of the program duplication we discuss here is significant, because it encourages internal competition for students and resources.

Even within the core, integration of academic and occupational education is difficult. With these functions, the degree of integration varies according to the level of analysis. At the highest level, administrators for vocational, academic, and developmental education are often either one and the same or closely connected. At the level of faculty and students, however, sharp distinctions are often present, depending upon the types of programs involved. Trade and technical programs such as automotive and air-conditioning, for example, were the least likely to be integrated with other core functions on any one of the three dimensions we have described. On the other hand, programs in professional areas, such as business administration and nursing, tended to be more integrated, particularly when their curricula called for a heavy emphasis on general education. However, the tensions between academic and vocational education remain a relevant problem for today's community colleges and, as an English faculty member observed, "most of the academic people have no clue what is going on on the vocational side" (College #3, English Faculty, 9/8/98).

Some educators have argued that there are important pedagogic benefits to the coordination of academic and vocational education, and this does appear to be a strategy to reduce the potential conflict between academic and occupational educational objectives (Grubb, 1999). Nevertheless, while many community college faculty members and administrators favor the integration of academic and vocational instruction, it is difficult to find well-developed programs that actually put the approach into practice (Perin, 1999). Federal initiatives such as the Secretary's Commission on Achieving

Necessary Skills (SCANS) and the Vocational and Technical Education Act (referred to as the Perkins Act), where they were implemented, may have at least brought these issues to the attention of college officials. At a California community college, for example, a biology faculty member found that implementing SCANS had brought their faculty closer together. This was described as "a shift in culture within the college" that was not easily accomplished: "from traditional departments that saw themselves as separate, it is very hard all of a sudden to start to work together" (College #1, Biology Faculty, 4/15/99).

The learning-communities model is a promising practice along these lines. These are based on a teamwork approach for faculty and students in particular degree programs such as biotechnology or business administration. Although learning communities are present or developing at a number of community colleges, none of the colleges in our study had these programs. Linked courses are a similar but scaled-down version of learning communities, in which a pair of teachers coordinate their curricula by adopting a common theme and teaching the same group of students. At one college in our study, for example, developmental classes were linked with subject matter courses in the social sciences.

In general, we found that the strongest integration between developmental education and the other core missions occurred at the administrative level, and that full-time faculty at our sites rarely taught both developmental and college-level courses. However, the issue of the integration of developmental education into other core missions is actually very complex, and goes beyond the scope of this study. This is because, with many under-prepared students, community colleges often have multiple ways of assisting students who are not yet college level. These include formal interventions such as tutoring centers, and informal interventions such as the efforts of individual teachers who orient their curricula and pedagogy around the preparation levels of their students (see Perin and Charron, 2003).

While integration between core missions is difficult and rare, integration between core and horizontal missions is almost unprecedented. There are sharp divisions between these missions in terms of faculty, administration, students, and facilities. This finding concurs with that of Dougherty and Bakia (2000) in their study of contract education.

The major differences between educational goals and modes of delivery of the core and horizontal missions make integration very difficult. However, the presidents of five of the eight colleges in our study had undertaken major initiatives aimed at mission integration within the past decade. These integration problems and their solutions are described in Table 4. Perhaps the most obvious theme elaborated in this table is that most of the integration efforts were aimed at the administrative level. Our interviews with faculty and staff indicated that outcomes of these efforts were largely symbolic and their influences on the practices or experiences of faculty and students were difficult to trace.

The most prevalent organizational change involved restructuring and adjusting the division of labor to reflect a growing emphasis on horizontal missions. At one of our Texas colleges, for example, the traditional college organizational structure had been inverted by giving the provost responsibility for all the horizontal missions, including, among others, continuing education, community services, and contract training. This individual saw his role as one of trying to balance the power of the college to reflect the fact that 50 percent of its student enrollments are in his areas. In the past, the horizontal missions at this college had been organized under campus presidents, but this did not work because "the president's job is about academic instruction" (College #5, 2/24/99). The provost told us that a major focus of his job is negotiating the political landscape of the college so that non-credit students can "get a fair shake." Nevertheless, according to him, even with this restructuring the college has a long way to go with regard to balancing its missions.

Our research found only isolated examples of departments or programs in which credit, non-credit, contract and continuing education programs were integrated according to a field or discipline as opposed to a mission. One such example was present at a college in Florida, where the environmental sciences department utilizes the same facility and administration to offer OSHA and firefighter training under contracts, an Associate of Science (AS) degree program to individual students, and leisure programs such as canoe trips to hundreds of community participants. Since some of these programs are self-sustaining, this department's budget also came from a diversified funding base, which suggests that financing need not dictate organizational structure. However, this program was remarkable because such coordination is rare.

Table 4: Integration Problems and Responses by College

College	Integration Problem	Response
#1	Non-credit and credit were originally separate organizations (non-credit was a run by the K-12 district).	Reorganization: flattened hierarchy in which non-credit was spread across several departments.
#2	None stated: College was academically focused but had a large non-credit operation at a separate campus.	
#3	None stated: College was academically focused and just beginning horizontal initiatives.	
#4	Adult education was expected to become a major college focus with the implementation of WIA.	Reorganization: Vice President of Workforce Development position established to bring adult education together with vocational degrees and certificates.
#5	Junior college in a rapidly growing metropolitan area that had a separate campus for continuing and contract education.	Changed name to community college and made horizontal missions the responsibility of the provost (as opposed to a vice president).
#6	Rapid expansion of contract education triggered a faculty take-over of the board of trustees, enabling the faculty to oust the president.	Town hall meetings involving students, faculty, and administrators. Reorganization: three vice presidents with responsibilities of multiple mission areas.
#7	None stated: College was focused on academic transfer with no attempt made to integrate a locally popular, but costly, continuing education program.	
#8	Major horizontal growth, including the development of a large new facility.	College vice president became the *de facto* leader of horizontal growth while the assistant vice president oversees core functions.

At each of the colleges, we asked to what extent the college faculty were involved in contract and continuing education. In general, we found almost no crossover of full-time faculty into contract and continuing education. One explanation for this had to do with the perception that faculty in contract and continuing education must have a different mindset than the college's regular, full-time faculty. In general, the administration of contract and continuing education perceived clear differences between their faculty and the full-time college faculty, reflecting alternative cultures and philosophies of their missions. The key difference is that the faculty members teaching in contract education are generally also working in industry. Directors of contract training report making "a real distinction" in the criteria of the people they hire compared to full-time college faculty (College #6, Director of Contract Education, 6/28/99).

Faculty working in industry are favored over full-time faculty because they are more up-to-date on technology. We were told that students in contract education "are looking for quite a different skill set" than traditional college students. In particular, they want to tap into the "real world experience" of their instructors (College #6, ABC Training Coordinator, 6/29/99).

It is also possible that community college contract and continuing education faculty tend to be part-time and working in industry for practical reasons. In many of these instructional areas it is quite difficult for colleges to hire full-time faculty because they are unable to compete with the salaries offered by industry. Using part-time faculty is less expensive for the colleges, but it also avoids the problem of having to hire faculty in these areas at a higher rate than liberal arts and sciences faculty, which can potentially lead to internal conflicts and legal problems for the colleges. Another important function of part-timers is flexibility; specifically, contract education faculty must be prepared to travel, teach in the evenings and on weekends, and agree to teach courses with short notice. For example, teaching contract education is generally omitted from collective bargaining agreements so that colleges will not be under any of the typical constraints related to scheduling full-time faculty.

All this is not to say that full-time faculty never teach in contract or continuing education. This is particularly true when the contract involves a degree program. For example, the Verizon Corporation funds an Applied Associate of Science (AAS) degree program for its employees through fifteen community colleges in New England and New York. At the time of our study, this program used full-time community college faculty and provided professional development opportunities and free laptop computers as a way of enticing faculty participation. The director of the program at one of the colleges in our study told us that the only faculty that were difficult to recruit to the program were those in the liberal arts, and that this had to do with their ambivalence about using computers as instructional tools. Community college faculty, as opposed to industry, developed the Verizon curriculum, which reinforced faculty buy-in (College #8, Program director, 10/20/98). On the other hand, when businesses try to micromanage which full-time faculty will teach their courses, college administrators have not been able to respond easily because their decisions are constrained by collective bargaining agreements.

At another of the colleges in our study, a few full-time faculty members had been recruited to teach contract education specifically in order to reduce tensions between missions with different goals and priorities. At this college, there had been a great deal of dissatisfaction when contract education enrollments grew exponentially during the mid-1990s. The recently appointed president of the college was encouraging the contract education division to hire full-time college faculty to mitigate the perception that this rapid growth posed a threat to the college's traditional programs. Nevertheless, at the time of our study only a couple of faculty had actually taught contract education classes, suggesting that the practice had not yet been embraced.

Financial integration among core and horizontal functions is common, but it is extremely difficult to clarify the extent of subsidization between missions because colleges do not routinely keep records of this. Vocational courses tend to be more expensive to run than academic courses. So, from a financial standpoint, academic education is needed to subsidize community college education. In some programs, such as nursing, class sizes are dictated by accreditation agencies and by the need for students to obtain clinical experience. In other programs, such as electronics and automotive repair, courses cannot be taught without the use of expensive equipment. Although separate colleges may have difficulty calculating the exact costs of individual programs, the Texas community college financing system can provide an example of the scope of these differences. In Texas, the projected cost in 2002 to colleges for the social sciences was $4.03 per contact hour, and English, language, philosophy, and humanities were projected at $4.26 per contact hour (Texas Higher Education Coordinating Board, 2001).[10] By contrast, Texas colleges projected a cost of $7.32 per contact hour for nursing degree programs, $9.08 for dental hygiene, and $5.26 for auto repair. These numbers reflect an amount that the colleges have agreed upon to request from the state, but it is never funded in full.

State financing systems and matriculation requirements conspire to influence integration in other ways as well. In Texas and Florida, where non-credit and credit

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[10] Texas financing for FY2002 was based on the following equation: Base Period Contact Hours ∗ Rate ∗ 0.821605462986. Numbers reported here are the Base Period Contact Hours; therefore these are funded at approximately 82% by the state.

courses are both reimbursed to some extent by the state, and where matriculation requires that students demonstrate academic proficiency, non-credit occupational programs are very attractive to the colleges. They can enroll and receive state reimbursement for non-credit students who would not be eligible for credit programs. But in Arizona, where matriculation requirements are weaker and non-credit courses receive no state reimbursement, many more occupational programs, even IT certification courses, are given for credit.

The separation between horizontal and core college missions permeates all aspects of the college governance. There may be a close relationship between the power of the full-time faculty and the organizational distance between horizontal functions, but our sample of colleges was not large enough to study this. In California, New York, and Massachusetts, where unions were strongest in this study, the colleges tended to do less in the way of contract and continuing education, or they maintained large physical and structural distances between college functions. These distances included "downtown" campuses and campus buildings that are out of sight of academic buildings. In Florida and Texas, where national unions were not involved at the colleges we studied, faculty contract provisions had less influence on the coordination of missions. But faculty culture and traditional norms still thwarted the integration of credit and non-credit activities.

Moreover, the interests and demands of the various constituencies may conflict. Eighteen-year-old students with baccalaureate aspirations might want a collegiate environment with semesters, liberal arts classes, and extra-curricular activities. These interests are consistent with the objectives of college faculty who look to the four-year colleges for their models of professional rights and behaviors. Business leaders and older workers want much more focused technical or occupational preparation that is not wedded to semester schedules or collegiate educational norms. For these groups, extra-curricular activities and other trappings of college life are irrelevant. Community groups may want the colleges to concentrate on serving populations with serious educational, economic, and social problems, but these efforts probably will not contribute to, and may detract from, the focused technical preparation that business wants, or the collegiate atmosphere sought by baccalaureate aspirants. Given these conflicting interests, it is not surprising that the colleges in effect segregate the services that they provide for their

disparate student groups. There may be some benefits to more coordination, but at some point presidents perceive that those benefits are outweighed by the difficulties of trying to serve many different objectives within a unified or integrated program.

Conclusion

Current trends clearly suggest that community colleges will continue to take on more activities and missions. We see no indication that colleges will deemphasize any of their core functions—preparation for transfer to a four-year school or terminal occupational education. In addition, most colleges are actively and enthusiastically engaging in both vertical and horizontal expansion. These developments are taking place despite a constant backdrop of criticism that colleges cannot be "all things to all people," and calls for sharper institutional focus. Our analysis suggests that such calls are likely to go unheeded. Given the limited resources available to community colleges, college administrators must constantly search for revenue. Activities outside the core functions generate new enrollments and revenue—including revenue over which administrators have considerable discretion. Moreover, such activities address the interests of influential constituencies, a crucial factor considering the political nature of the community college funding system. Thus, by shedding programs in search of more focus, colleges risk alienating constituencies and ultimately reducing the overall resources available to the institution.

Furthermore, the potential benefits of increased efficiency with a more focused strategy have not been measured, and indeed probably cannot be measured definitively given current community college information systems. A more focused strategy therefore implies giving up students, revenues, and political support in favor of a plausible but unmeasured benefit in efficiency. It is hardly surprising that comprehensiveness continues unchecked.

In institutions that continue to engage in multiple missions, it seems to make sense for administrators and faculty to search for complementarities and synergies among those missions and to try to find ways to integrate and coordinate their varied activities. Yet we have also found that little of this integration actually goes on at community

colleges, as many functions that might be brought together, such as credit and non-credit instruction in the same fields, continue to be carried out independently. Our analysis also suggests that there are strong forces that discourage such integration. If different activities serve different types of students, then programs with very different characteristics may better serve those diverse student interests. For some similar activities, too much integration or coordination may not be optimal. Ironically, this seems to concede something to the argument that more focused programs have advantages.

What emerges then is a set of more or less focused and independent programs housed within one large umbrella organization. The politics of community college finance is in effect the glue that holds these disparate programs within the same organization. If college revenues were based on tuition charged for specific services, then administrators could focus on one or two of these populations, and we might see more specialized institutions emerging. But because of the political nature of the funding process, abandoning one constituency, for example the business community, may threaten the funding base of services of other groups, for example, traditional eighteen-year-old college students.

This leaves open the question of whether some or all of the community college functions might be more effectively carried out in more focused institutions. We have argued that given public policies that shape the college environment, comprehensiveness is in the interest of the institutions. However, that public policy could be changed. For example, a state could create one set of institutions for transfer-oriented students and one for terminal occupational students. States could bar some institutions from reimbursements for non-credit courses, thus encouraging them to focus on their credit offerings. State economic development funds, often used to pay for customized training at community colleges, could be earmarked for institutions not engaged in credit-oriented instruction. These policies all seem unlikely and indeed, in some cases, recent developments have moved in the opposite direction—several states that did have separate transfer-oriented and technical college systems have, over the last decade, merged those systems.

Clearly, before any significant policy changes designed to create more focused institutions can be seriously considered, we will need better measures of the costs and benefits of focused versus comprehensive strategies. Some colleges do have rudimentary systems for tracking costs and revenues generated by particular programs, but these are the exceptions. We should emphasize that, in many cases, administrators are reluctant to make this type of information public, since such public knowledge can create political controversies and reduce operational flexibility. Nevertheless, considerable progress can be made in developing better measures that will help us understand the costs and tradeoffs involved with combining or separating the varied activities and functions now being carried out by community colleges.   Unless researchers and educators develop those measures, the colleges will continue to evolve into even more complex institutions that house an expanding number of more or less independent activities.

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