

Student Planning and Information Problems in Different College Structures

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Over the past three decades, colleges have experienced revolutionary changes, and the enrollment revolution has had a particularly profound impact on 2-year colleges. We describe the new kinds of students who are entering college today and the ways that colleges have begun to adapt. Then, analyzing interviews with students and administrators and a survey of nearly 4,400 students in 14 two-year colleges, we examine four questions: (1) Do students have serious information problems, and are college procedures ever responsible? (2) How can college structures improve students' information and planning? (3) Do colleges with alternative structures affect student information and confidence? (4) Do alternative college structures matter, net of student attributes? The results suggest new approaches to addressing the information needs of college students, which may have important implications for their confidence and success. The evidence in this study suggests that structured programs, structured advising, and structured peer supports should be added to the menu of college policy alternatives that deserve further consideration.

INTRODUCTION

A generation ago, fewer than half of high school graduates went to college; now almost two thirds do (National Center for Education Statistics, 2001). This enrollment revolution has had a particularly profound impact on community colleges. In the past three decades, enrollment at 4-year colleges has doubled, while enrollment at 2-year schools increased five-fold (National Center for Education Statistics), now constituting almost half of all college enrollments (Bailey, 2003). We describe the new kinds of students who are entering college today and examine the way that 2-year colleges have begun to adapt for these new students. We then pose four questions

about students and colleges that have important implications for the success of the new college student.

In answering these questions, we first refer to detailed student interviews, showing that students often have serious information problems and make costly mistakes, and noting that college procedures sometimes increase students' information problems. Second, interviews with administrators revealed that some 2-year colleges—especially private occupational colleges—create three kinds of structures with the aim of reducing students' information difficulties and improving their likelihood of degree completion. Third, analyzing a survey of nearly 4,400 students in 14 two-year colleges, we examine whether students have better information and more confidence about degree completion in colleges with these structures. Fourth, we examine whether colleges with these structures improve students' information and confidence about degree completion, even after controls for student attributes. Finally, we examine whether the college effect on students' confidence can be explained by improved information. Although these findings are tentative, they suggest that college structures might help students to make more informed choices at college and have more confidence about degree completion.

BACKGROUND

THEORETICAL FRAMEWORK

Over the past three decades, scholars have devoted a great deal of attention to the role of cultural and social capital in educational achievement and attainment. Bourdieu and Passeron (1977) suggested that success in schools requires familiarity with the dominant culture. A lack of such knowledge leaves some students—especially those marginalized by the dominant culture, like working-class and racial and ethnic minority students—at a disadvantage in the competition for academic credentials. Students who have not mastered the “rules of the game” will not, according to Bourdieu (1984), be the most successful in mainstream institutions like schools.

Similarly, Coleman (1988) asserted that social capital is critical to educational success. He hypothesized that certain relationships facilitate students' “productive activity” at school by creating and communicating obligations and expectations, information, and social norms. Similar to Bourdieu's thinking on cultural capital, students who come from “mainstream” (i.e., White, middle-class) families and communities are assumed to have more of the social capital that allows them access to institutional resources, and as a result, they are more successful in school.

Although most scholarship conceives of cultural capital in terms of knowledge and behaviors, and social capital in terms of embeddedness and

relationships, the two concepts overlap with respect to the role of information. Indeed, Bourdieu and Wacquant (1992) suggested that cultural capital might be more appropriately termed “informational capital.” Moreover, Coleman (1988) and other scholars underscored the critical nature of information—which is determined by relationships—to students’ educational achievement and attainment (e.g., Lareau & Horvat, 1999; Stanton-Salazar & Dornbusch, 1995). The types of information that scholars have suggested may be important to student success include instrumental information—for example, on coursework, careers, and social services (Deil-Amen & Rosebaum, 2003; Stanton-Salazar & Dornbusch)—and information on bureaucratic requirements and the behavioral demands of schools (Deil-Amen & Rosenbaum; Lareau & Horvat).

Even as scholars appear to agree that information is a crucial resource in educational achievement and attainment, and that some students may be disadvantaged in their access to useful information, few researchers have focused explicitly on the institutional structures that direct the flow of information within educational institutions. We seek to extend the literature by analyzing students’ information needs in different institutional settings. We show how institutional procedures can contribute to students’ information problems and how colleges with alternative structures affect student information about college requirements. We then examine whether this information in turn affects student confidence in degree completion. Finally, we examine whether alternative college structures matter, net of student attributes. We find that otherwise similar students have much better understanding of their situation in one kind of college than in another, which suggests that institutional structures can help students to get information that may enhance their success in school.

Our findings may be especially important in the realm of higher education, where explosive increases in enrollments over the past three decades have dramatically changed the face of colleges’ student bodies. Whereas in the past, most college students came from middle- or upper-class White families, more and more low-income and racial minority students are enrolling in postsecondary education. If cultural and social capital is unequally distributed among the population, as theorists contend, these new students may lack some of the “mainstream” knowledge and behaviors that postsecondary institutions have taken for granted among their students in the past.

THE NEW COLLEGE STUDENTS AND THEIR INFORMATION NEEDS

In the last four decades, postsecondary enrollments have expanded dramatically. Of high school graduates aged 18 to 24, just 45% enrolled in college in 1960, whereas 63% did so in 1999 (National Center for Education Statistics, 2001, Table 184). The increased campus presence of racial and

ethnic minorities, low-income and low-achieving students, and older and part-time students stands in contrast to the student bodies of past generations, who were mainly White, middle- and upper-class, relatively high achieving, 18 to 24 years old, and attending full time.¹ Two-year colleges in particular have opened higher education to these new kinds of college students, regardless of economic or educational background (Brint & Karabel, 1989; Dougherty, 1994). The low tuition, open admissions, and convenient locations of community colleges have dismantled many of the traditional barriers to higher education faced by disadvantaged populations (Grubb, 1996). Even private 2-year colleges have become an option for low-income students with the help of state and federal funding (Bailey, Badway, & Gumport, 2002).

More than just enrolling these new kinds of students, community colleges have adapted their practices to accommodate them. Because many of these new students have serious academic difficulties, community colleges have devised extensive remedial programs, which serve about two thirds of all community college students (Deil-Amen & Rosenbaum, 2003). Because so many students attend part time, community colleges have made amazing changes in the locations and timing of courses to make them more accessible to students. Satellite campuses bring classes closer to students to reduce their commuting time. Classes are scheduled in nontraditional time slots, including evenings and weekends. These are dramatic adaptations. Three decades ago, no one would have imagined Sunday morning classes located in a shopping center.

Despite these remarkable adaptations, this study suggests that many 2-year college students have trouble understanding college requirements. A lack of information appears to cloud educational planning and discourage students. In contrast, students who feel that they have enough information also are shown to feel more confident about their chances of successfully completing their degree plans. Moreover, we find that college structures and procedures might indeed help the “new” college students by improving their information and confidence.

TWO TYPES OF 2-YEAR COLLEGES

This study focuses on two types of institutions that grant primarily associate’s degrees. Community colleges are low-tuition public institutions. They offer many electives and program options, including occupational programs, which are the focus of this analysis.

Although most 2-year college enrollments are in community colleges, about 4% are in private colleges, which provide an understudied alternative (Bailey et al., 2002). Consequently, we also study a group of private colleges that offer accredited associate’s degrees in occupational fields, which we call

occupational colleges. These colleges often began as traditional business or technical schools. But unlike most schools of this sort, these occupational colleges are accredited by national associations, which are similar to the regional groups that accredit most community colleges. These occupational colleges are quite comparable with community colleges in terms of their occupational program offerings and mission to educate students for the workforce, so they provide an interesting alternative model of how occupational programs might operate. On the other hand, they are dissimilar to most business and technical schools, which offer no degree above a certificate (Apling, 1993).

Research suggests that public and private 2-year colleges differ greatly in their degree completion rates. In the most recent nationally representative longitudinal survey available, the 5-year degree completion rates (for the associate's or bachelor's degree) for students who began at public 2-year colleges (community colleges) in 1995 were only 26% overall—and 10.8% for Black students and 21.4% for Hispanic students (Bailey, Jacobs, Jenkins, & Leinbach, 2003). Although some students might not seek a degree, survey data show that large numbers of students in subbaccalaureate programs do report a certificate, degree, or university transfer as their goal (46% of occupational program students and 62% of transfer students at community colleges; Bailey et al., 2003).

In contrast, research suggests that private occupational colleges have better degree completion rates than community colleges, especially for African American and Hispanic students (Bailey et al., 2003; Jenkins, 2002). The one occupational college in our sample for which we have systematic information shows high 6-year completion rates, especially among minority students (65.1% overall, 57.0% for Blacks, 77.9% for Hispanics). These results are similar to the state degree-to-enrollment figures cited by Jenkins and the national completion rates cited by Bailey et al. (2003). Although we lack completion rates for most of the private occupational colleges, it is noteworthy that according to data collected by the Illinois Board of Higher Education (IBHE), the ratio of graduates to enrollees is much higher in private 2-year colleges than in their public counterparts (2002).²

Although occupational colleges have some advantages, as we will note, they also have some disadvantages. They are smaller than community colleges, offer fewer programs and a more limited general education curriculum, and usually require students to declare their program at entry. Changes of major are possible but may lengthen the time to degree completion. Career and educational exploration are severely limited, generally within the confines of an occupational field. Transfers to bachelor's programs are possible but usually only to certain programs and colleges that offer applied bachelor's degrees. Receiving no public subsidy, these private schools have much higher tuitions than community colleges, although

federal loans and grants permit low-income students to afford these colleges. Additionally, these colleges 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, 1974), but the issue has not been examined more recently.

On the other hand, our topic does not illustrate some of public colleges' strengths: low tuition, small classes, dedicated instructors, variety of course offerings, flexibility of scheduling, and so on. Although we are impressed with many aspects of community colleges, this article considers their handling of information in occupational programs, and that raises some concerns.

Despite differences in funding source, level of tuition, and size, the two types of colleges have many similarities. Compared with other colleges, both types are regarded as relatively low-status institutions, and they have lower admissions requirements, offer lower status degrees, and relatively few of their graduates attain 4-year degrees. In both types of colleges, many students are from lower- or working-class backgrounds and generally have poor labor market prospects (Dougherty, 1994; Grubb, 1996). Students enter both types of colleges seeking access to primary labor market jobs, and we are studying programs in the two types of colleges that train students for such jobs.

SAMPLE AND DATA

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 nonprofit. All schools are located in a large Midwestern city and its surrounding suburbs. All offer 2-year accredited programs leading to associate's degrees in similar occupational fields, including business, accounting, computer information systems (CIS), computer-aided drafting (CAD), court reporting and paralegal, office technology, electronics, engineering, and a variety of health programs. The schools were systematically selected based on the comparability of their occupational programs.

Our research used qualitative methods, including 1-hour semistructured interviews with nearly 100 students and 100 administrators. Students were selected based on criteria to ensure comparability across institution types and to include students in a variety of occupational programs. Researchers selected administrators to cover the various organizational roles, including occupational program chairs, admissions officers, counseling and advising staff (including career advising), and deans and presidents. Interviews were typically about an hour in length and were tape recorded and transcribed

verbatim. We coded interview data both deductively and inductively, beginning with respondents' answers to specific interview questions about information and planning for college and careers. We then coded for related themes that emerged across cases. The research team also conducted extensive review of college materials—including, for example, program guides, course schedules, Internet sites, and so on—and made repeated observations of campus activities, taking detailed field notes.

Like most qualitative studies, we do not seek to prove typicality of our cases, but we have some indication that our community colleges are similar to others on at least one indicator. Data collected by the state where these schools are located indicates that 50% of 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, 2001, Table VI-2). Nationally, 71% of community college students expect to earn a bachelor's degree or higher (National Center for Education Statistics, 2001).

Our occupational colleges are not typical. A small minority of private for-profit colleges are accredited to offer associate's degrees (Apling, 1993). These private colleges are not a random sample; they offer some of the best programs in these fields and may be considered to represent an ideal type. As such, these colleges provide a different perspective on how 2-year colleges can operate, versus what one can observe in community colleges. Still, our occupational colleges were selected to be comparable with community colleges, offering accredited associate's degrees of similar quality and in the same occupational fields.

All 14 of our schools have large portions of the "new" college students, including low-income and racial minority students and students with low high school achievement. We administered a survey to 4,365 students in comparable occupational classes in the 14 institutions. To include students at different stages in their education, we surveyed students in both basic and advanced courses, most of which were core requirements for the occupational programs in question and would enroll mostly occupational students.

Although one might expect private colleges' higher tuition rates to draw students from more advantaged backgrounds, these occupational colleges aggressively use state and federal funding for students, so they actually enroll the same kinds of working-class students that community colleges do (Deil-Amen & Rosenbaum, 2003). As noted, analyses of state (Jenkins, 2002) and national data (Bailey et al., 2002) show that for-profit degree-granting institutions enroll and graduate greater proportions of the "new" college students than their public college counterparts. Similarly, our survey finds that to the extent that students at the two types of colleges differ, occupational college students have less affluent and less educated parents and lower high school achievement than their counterparts at community colleges, and they are less likely to be White (see Table 1). Consequently,

because theories of cultural and social capital suggest that information useful in mainstream institutions is less available to students from blue-collar and minority families, occupational college students might be expected to be less informed about college requirements than community college students. This is important to note because we later examine whether occupational college structures improve students' information, even as their students' backgrounds are stacked against that outcome.

RESULTS

This article explores four central questions about the new college students' information needs and institutional responses to these needs. We ask (1) whether students have serious information problems and if college procedures are ever responsible; (2) how colleges use institutional structures to address student information problems; (3) whether students report having more adequate information and confidence in occupational colleges; and (4) whether, after controls for student attributes, occupational colleges improve students' information and whether information helps explain students' improved confidence in degree completion. We refer to our extensive interview data to examine the first two questions and then turn to our student survey to address the final two.

1. DO STUDENTS HAVE SERIOUS INFORMATION PROBLEMS, AND ARE COLLEGE PROCEDURES EVER RESPONSIBLE?

Colleges offer a wide range of options to students, and they assume that students know how to make plans that will lead to realization of their goals. Although many traditional students and some of the new students (e.g., older students) may possess sufficient information or the skills to obtain it, some students may have difficulty with this approach. Students who did poorly in high school may not understand college course offerings and may

Table 1. Descriptive Statistics of Student Survey Sample (valid percentages)

	Community Colleges	Occupational Colleges
Male	45%	46%
Racial/ethnic minority	52%	69%
HS grades C- or below	25%	27%
Parent education HS or less	48%	57%
Parent income \$30K/yr or less	40%	44%
Mean age	25	24
<i>N</i>	1,470	2,732

be reluctant to ask. Students from families with low income or education levels may not get college advice from parents who have little or no experience with postsecondary education. These students may have significant information problems and difficulty in knowing how to accomplish their educational goals. In fact, our survey data show that parent education and income are significantly correlated with students' reported information about college requirements.

Although academic models sometimes acknowledge that information is imperfect, our interviews suggest that "imperfect" is an understatement. Our interviews reveal serious deficiencies in students' information at both community and occupational colleges. Many students make educational choices without considering alternatives, and they rely on meager, vague, and even incorrect information. Asked why she chose her occupational college, Tina³ offered a typical response: "I don't know . . . my sister was telling me her friend just graduated from [the school], and really liked it, so I called [to enroll]." With respect to her major, she continued, "Nothing really stood out, it was just something that interested me. No real, one major thing." Similarly, Becky answered that she knew about her occupational college "just from what my cousin told me—it's not a lot. She just said it's a good school, you can do this, this, and that. And I figured, okay, it's two years, I can graduate. So I went there." Our interviews indicate that students often do not investigate other schools or obtain a clear idea of how schools vary. Even when considering other colleges, they obtain paltry information about alternatives. Lorena investigated college options "just looking through a phone book, and getting all the numbers that had paralegal [programs]."

A student's choice of majors may be determined by a single high school course. In the prior example, Lorena chose paralegal based on one high school social studies class. Another student, Rocio, chose accounting after a single course and despite a general dislike for mathematics: "My senior year, I took a class in accounting, and I really liked it . . . and I don't really like math." These students used scant information and questionable sources, and they did not actively examine alternatives or consider conflicting information (such as a bookkeeper's dislike of math).

Another problem is perhaps more important than a student's own failure to gather information about college. Interviews also indicate that students' informational problems once they are in college are sometimes exacerbated by college procedures. For instance, Rocio found herself in trouble because not all requirements were clear from the outset:

Because there's certain [courses] that you *have to take*, and some, like, if you *want*. But then it ends up that you *do* need them . . . I haven't taken my typing class because I haven't taken the test; and I couldn't

take some of the classes I had to because of that. Now . . . it's like backing me up, those classes." (emphasis in original)

Another student, Leah, asked community college staff about the appropriate courses to prepare her for transfer to a university, but the advisor suggested coursework that would not help:

Leah: I took a computer course because my counselor told me to take that . . . because it would transfer . . . but in some ways, I waste my time and money, you know.

Interviewer: Because it didn't count for the transfer degree?

Leah: Right . . . I told them specifically that I am interested in transferring with a science background . . . And she was like, "Well, you can look at it in a positive way, you know, that you learned so and so," but yeah, but that wasn't my point.

Part of the reason that Leah made the wrong course choices relates directly to advising practices. In her community college, much of the advising during the hectic registration period was conducted by instructors who may not have had information on programs outside their own departments. She reported, "I don't think they were trained to be counselors, like the instructors were taking turns. Because I saw my computer instructor sitting there [advising] . . . and before I knew anything, I was picking up computer classes."

Not all advising problems arise from advisors' self-interest, of course. Some problems come up because advising is unavailable. A student at another community college, Wanda, painted an unfortunate picture of advising practices in both academic and administrative spheres. She insisted, "if you have any problems with your financial aid, or any other problems, you can't see them [advisors] directly . . . You have to make an appointment, and an appointment can be months from now. But you need to get that problem resolved right then."

Careful and informed advising is certainly important, but it may not be enough. Tina commented on the difference between academic advising practices at her current occupational college and her prior community college. She explained that at the community college, "you have to go to *them* [the advisors]. Here [occupational college], they *make* you see the first-term advisor . . . and help you through."

Institutional practices for remediation can also create information problems for students, sometimes with serious consequences. Wanda had originally planned to be in community college for 2 years before taking full-time work. Because she placed into remedial classes, however, she must spend at least 3 years on her associate's degree. School staff, she noted, "kept telling

me that, ‘This [course] is just to help you get into 112.’ . . . I didn’t understand . . . They count towards your electives, but don’t count for your degree.” This misunderstanding meant that Wanda must spend an extra year in school that she hadn’t anticipated.

In sum, students at both types of school reported using meager, vague, and even incorrect information as the basis for their educational choices, such as where to enroll and what field to study. Once in college, they also reported information problems, such as taking the wrong classes or misunderstanding the value of remedial coursework. Although we do not claim that our interview sample is representative of all students at these colleges, student reports indicate that college practices are sometimes responsible for impeding students’ ability to obtain suitable information to guide their choices. Students fail to take the courses that they need, or they take courses that they don’t need, delaying their progress. Students mentioned college procedures for advising, scheduling, communicating requirements, and providing sequential offerings, all of which affected their capacity to implement their educational goals.

College personnel also discussed student information problems in our interviews with them. A pattern emerged from personnel reports, however, that suggests that the two college types approach student information problems differently.

2. HOW CAN COLLEGE STRUCTURES IMPROVE STUDENTS’ INFORMATION AND PLANNING?

Community college administrators, including those in charge of occupational programs, reported that they address students’ information difficulties by providing *more* information. College catalogs get bigger, student handbooks are developed, and additional informational meetings are provided for those who want to come. Although “piling on information” may have benefits, it assumes that students have time for additional reading and meetings, that students can understand a plethora of complex information, and that students realize that they have information problems. These assumptions may not apply to all students. Students without background information about college and lacking the time or confidence to chase down advisors and administrators would probably face information difficulties and make costly mistakes, just as the students cited previously did.

Although community colleges provide counseling services, counseling is often regarded as peripheral: Offices are in out-of-the-way locations and have few staff (Deil-Amen & Rosenbaum, 2003). Some counselors admit that they could not possibly handle a substantial fraction of the student body if those students were to seek out their services. Asked if more students

could benefit from the services of her office, one community college counselor responded, "Absolutely, but there's just no way. There's over 6,000-plus students . . . and there's three full-time professional counselors, and the rest are part-time counselors that fill in the blanks." Like the health services office, the guidance office is designed to assist the few students who have the initiative to seek help.

Of course, resources are tight at most community colleges, whose public mandate is broad and expanding, and budgets are repeatedly cut. One top administrator at a community college system included in our sample explained that, when faced with budget cuts, the colleges progressively cut counseling staff while trying to preserve instruction. This may be due to organizational priorities toward instruction or due to funding formulas that reward classroom enrollments but ignore degree completion rates. In responding to reduced resources, community colleges may have preserved their commitment to one mandate at the expense of another. If colleges were forced to be more attentive to student mistakes and dropout rates, one might wonder if counseling would be given greater priority. In fact, at one community college in our sample, low retention rates were deemed a problem for enrollments, and the college response was to focus precisely on improving student information through enhanced advising. Yet this school's response was atypical among the community colleges.

Occupational colleges do not have the broad mandate of community colleges, but their mission is essentially the same as community colleges' mandate: to develop an educated workforce. Within this sphere, occupational colleges show that an alternative approach is possible. According to administrators' reports, occupational colleges address students' information difficulties by explicitly providing three forms of structure: (a) structured programs, (b) structured advising, and (c) structured peer support.

Structured programs

Instead of providing more information, administrators reported that these occupational colleges create highly structured programs that require little information. They specify a clear sequence of courses that leads efficiently to students' goals. By limiting students' choices and providing information targeted toward students' immediate needs, students are prevented from making mistakes that increase tuition, the time needed to complete the courses, and the risks of noncompletion. One occupational college administrator explained how programs were explicitly designed to reduce student missteps:

We try to minimize the opportunities for students to go down the wrong path in terms of the courses they need to take. So there are a

few electives and those that we have are in the general education area . . . They all take roughly the same courses.

Course options are fewer at occupational colleges, but so are students' mistakes, an issue to which we will return later in this article.

Structured advising

Instead of relying on students' initiative to contact advisors, administrators reported that these occupational colleges require mandatory and frequent meetings at least once a term (and more at some colleges). Administrators recognize the necessity of such structures for some students; one reported, "we have a lot of personalized [advisory] services, and we have to because otherwise, a lot of the students . . . would be lost." Unlike the large, generic, optional information meetings at community colleges (Deil-Amen & Rosebaum, 2003), the meetings are small, program specific, and mandatory at occupational colleges. Even students who are too passive or confused to seek out advisors must attend these meetings, where they get information about what actions and courses to take at that time. Instead of advisors being in peripheral locations, advisors are located centrally, so students must pass through the guidance area every day on their way to classes. The centrality of advising is structured into the time and space of students' regular schedules in these colleges, and advising keeps students on track toward their goals.

Structured peer support

Although extracurricular activities and dormitories reduce dropout rates at 4-year colleges, these sources of social support are limited or absent at nearly all 2-year colleges (Tinto, 1993). However, these occupational colleges offer another form of social support. Administrators reported that they create peer cohorts that progress together through the same courses and advisory meetings in each occupational program. These cohorts make it easy and cost effective to offer required courses and frequent advising of cohort groups. Moreover, peer cohorts also provide information, support, and a normative reference point for students to judge their own progress. As one administrator put it, "We give them schedules and give them the times . . . We work the cohorts together . . . all [these] things are helping to get them to graduation." Students can see what peers are doing and how to do it. Peer cohorts provide an informal structure to keep students on track toward their goals.

Of course, it is not surprising that occupational college personnel feel that their colleges' structures should improve student information and planning. In the next sections, we test their assertions using our student survey data.

3. DO COLLEGES WITH ALTERNATIVE STRUCTURES AFFECT STUDENT INFORMATION, PLANNING, AND CONFIDENCE IN DEGREE COMPLETION?

If these administrators' descriptions are accurate, we would expect occupational college students to have more information about college requirements, to make fewer mistakes in choosing courses, and to report increased confidence that they can complete a degree. Our survey of 4,365 students in seven community colleges and seven occupational colleges asked students about the adequacy of the information they get, the courses they take, and their chances of achieving their degree goals. Excluding cases with missing data on the dependent variables yielded a total *N* of 4,202. This section analyzes whether students reported different experiences in occupational colleges and community colleges.

We asked students a series of questions about their information needs, which are listed in the first three rows of Table 2. Responses to each question were given on a five-point Likert scale of 1 = *strongly disagree* to 5 = *strongly agree*. According to our *t* tests, compared with community college students, occupational college students are significantly more likely to be certain which courses they need for their degree plans (76% vs. 65%, *p* < .001); more likely to agree that they know which courses give credit

Table 2. Student Information and Planning by Institution Type (two-tailed *t* test)

	Community Colleges (<i>N</i> = 1470)	Occupational Colleges (<i>N</i> = 2732)	<i>F</i> (<i>p</i>)
Agree+Strongly Agree: "I'm certain which courses I need for my degree plans."	65%	76%	213.6 (< .001)
Agree+Strongly Agree: "I know which of my courses give credit toward my degree."	74%	80%	101.6 (< .001)
Agree+Strongly Agree: "I have enough information about requirements and prerequisites."	58%	70%	167.6 (< .001)
Respondent has taken course that he or she later found does not apply toward degree.	46%	23%	551.3 (< .001)
Respondents believe remedial course they took counts toward degree requirements.	32%	8%	1812.4 (< .001)
Respondents believe it is "very likely" that they will achieve first degree goal.	70%	82%	282.4 (< .001)

Table 3. Ordinary Least Squares Regression of Student Information About College Requirements on Demographic, Achievement, and Institutional Variables

	<i>b</i> (<i>SE</i>)
Male	-.021 (.080)
No gender reported	-.130 (.174)
Racial/ethnic minority	-.251** (.089)
No race reported	-.295* (.129)
Age	.194*** (.030)
Age squared	-.003*** (.000)
HS grades (4 = A)	.237*** (.054)
Parent education (truncated)	.082** (.030)
Parent income (truncated)	.078* (.035)
Occupational college	.778*** (.081)
Constant	4.361*** (.496)
R-squared	.047
<i>N</i>	4,202

* $p < .05$. ** $p < .01$. *** $p < .001$.

(80% vs. 74%, $p < .001$); and more likely to agree that they have enough information about requirements and prerequisites (70% vs. 58%, $p < .001$).

We also asked about coursework that students had completed. Table 2 shows that community college students are significantly more likely to report having taken a course that they “later discovered would not count toward [the] degree” (46% vs. 23% at occupational colleges). Moreover, as the next row in Table 2 shows, nearly a third (32%) of community college students mistakenly believe that a remedial class, which they reported as having taken, would give credit toward their degree requirements, while just 8% of occupational college students hold this mistaken belief. Such courses cost time and tuition and may well pose risks to students’ goals. Finally, we asked students how likely they thought it was that they would achieve their first degree goal (responses were offered on a 5-point scale, with 1 = *very unlikely* and 5 = *very likely*). As the bottom row of Table 2 shows, occupational college students are also significantly more likely to believe that it is very likely that they will achieve their degree goals (82% vs. 70%,

$p < .001$). These raw statistics show that, compared with community college students, occupational college students report more information, fewer mistakes, and higher confidence about degree completion.

4. DO ALTERNATIVE COLLEGE STRUCTURES MATTER, NET OF STUDENT ATTRIBUTES?

Although these results support the contentions of occupational college administrators about college structures helping students, it is possible that the students who choose to enroll at occupational colleges are different from their counterparts at community colleges. Multivariate analysis allows us to examine differences after controlling for other possible influences, including student attributes. This section examines which kinds of students have more information, which kinds of students are confident about degree completion, and whether occupational colleges increase students' information and confidence about degree completion, after controlling for individual attributes. Finally, we examine whether the occupational college influence on student confidence could be explained by students' information.

Adding the three items that ask about students' information (see Table 2) into a single scale ($\alpha = .86$; scores range from 0 to 12, with a mean of 8.97 and a standard deviation of 2.51), we used ordinary least squares (OLS) regression to explain which students reported having sufficient information on this scale.⁴ In Table 3, the coefficients for the students' pre-college attributes (gender, race, age, high school achievement, and parent education and income) show that sufficient information is significantly less common among racial minority students, younger students (though the effect of age is nonlinear, as the squared term indicates: information declines after the mid-30s), students with lower high school grades, and students whose parents have less education and income. These findings are consistent with theories of cultural and social capital, which would lead us to expect an association between socioeconomic advantage and information about college. Despite controls for all these pre-college attributes of the student, however, we find that occupational colleges still have a significant positive effect on student information. Of course, one might argue that occupational college students chose their schools precisely because they had better information in the first place. Although we cannot rule out selection effects in this nonexperimental data, our interview data with occupational college students do not indicate that they had better information prior to enrolling in college. Moreover, as noted earlier, theories of cultural and social capital would lead us to expect that students at the occupational colleges in our sample might have less information about college requirements given their somewhat less advantaged backgrounds as compared with community college students.

The observed occupational college effect might work differently for students in different majors. Recall how occupational college personnel reported that structured programs, advising, and peer support were meant to improve student information. If this is true, community college programs with such characteristics might also improve student information. At most of the community colleges in our sample, students, whether in academic or occupational majors, have a great deal of leeway in selecting courses each term. Even when curricula are specifically determined, courses may not be offered each term in the sequence that the student needs. In one program area, however, community colleges have adopted much more structure. In response to state licensure requirements for health programs, community colleges have adopted elaborate formal structures—most notably, structured programs and cohort groups—that are similar to the structures observed at our occupational colleges.

Table 4 reports just the coefficient for occupational college for students in a given major, controlling for the same covariates used in Table 3. These results show a positive association between occupational colleges and information in seven of the eight major categories; the relationship is significant for students in four of these majors—business, accounting, computers, and electronics. In stark contrast, for students in health programs, the occupational college coefficient is significantly negative. Occupational colleges are actually associated with lower levels of information for students in health programs. In this case, the exception appears to prove the rule that institutional structures can improve students' information. Moreover, it shows that community colleges can successfully adopt these structures, at least on a limited basis.

Finally, we examine students' confidence in their ability to complete the college degree (Table 5). Given the frustrations expressed by students in our interview sample, it seems plausible that better information would be associated with greater confidence. Students' confidence in their degree completion is important in itself, and one might suspect that it may be an

Table 4. Comparing Students in Comparable Programs: Unstandardized Ordinary Least Squares Coefficients for Occupational College Variable (net of controls for demographics, achievement, institutional, and information variables)

	Business	Account- ing	Computer	Office Technology	Elec- tronics	CAD	Engineer- ing	Health
<i>b</i>	.979***	.698*	.963***	.121	.903**	.696	.260	-1.059***
(<i>SE</i>)	(.194)	(.297)	(.172)	(.425)	(.306)	(.517)	(.460)	(.263)
<i>N</i>	783	320	958	272	477	127	383	368

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5. Ordinary Least Squares Regression of Students' Perceived Likelihood of Achieving First-Degree Goal on Demographics, Achievement, Institutional, and Information Variables

	Model 1	Model 2
	<i>b</i> (<i>SE</i>)	<i>b</i> (<i>SE</i>)
Male	-.035 (.019)	-.035 (.018)
No sex reported	-.076 (.040)	-.070 (.040)
Racial/ethnic minority	-.016 (.021)	-.006 (.020)
No race reported	-.056 (.030)	-.043 (.029)
Age	.030*** (.007)	.022** (.007)
Age squared	-.0005*** (.000)	-.0004*** (.000)
HS grades (4 = A)	.021 (.013)	.011 (.012)
Parent education (truncated)	.002 (.007)	-.001 (.007)
Parent income (truncated)	.030*** (.008)	.027** (.008)
Occupational college	.170*** (.019)	.137*** (.019)
Student information		.042*** (.004)
Constant	9.028*** (.115)	8.845*** (.114)
Adj. R-squared	.028	.059
<i>N</i>	4,202	4,202

Source: Authors' data.

* $p < .05$. ** $p < .01$. *** $p < .001$.

important determinant of students' decisions to persist in college, particularly when they experience conflicting pressures. As Table 5 shows, we find that being at an occupational college is associated with significantly higher student confidence, net of controls for students' attributes. With the student information scale as a covariate, we find that it has a significant positive effect on students' confidence in their degree completion. Students with more information have more confidence in their degree completion, even after controlling for background characteristics. Moreover, student information substantially reduces the coefficient for occupational colleges (the coefficient declines by about 20%, from .170 to .137, though the

difference is not significant at the .05 level). This suggests that the occupational college effect on students' confidence is partly explained by students' greater information in these colleges.

Presumably, if community colleges provided better information, students might have greater confidence in their degree completion. In fact, among community college students in our survey sample, those students majoring in the most structured programs (e.g., health) did indeed report the highest mean levels of confidence in the likelihood of completing the degree, though the differences were not statistically significant.

DISCUSSION AND CONCLUSIONS

Community colleges have begun an important revolution in postsecondary education, and they have played a critical role in expanding opportunities for new groups of students. However, as Bailey (2003) has noted, community colleges face some significant challenges, and structures that improve student information and planning could serve to enhance college effectiveness.

We concur with Bailey (2003) in the view that occupational colleges pose no challenge to the dominance of community colleges. Private colleges contribute a very small portion of the enrollment in 2-year colleges (about 4%), and occupational colleges make up only a small portion of private colleges. Furthermore, much of their enrollment depends upon federal and state funds that are unlikely to increase.

This study suggests, however, that occupational colleges may provide some ideas about policy alternatives that could benefit community colleges, especially those college students who may lack appropriate information about educational opportunities. Although community colleges provide more information, occupational colleges introduce structures that limit the need for information, that put mandatory advising into the space and time in students' regular schedules, and that place students in peer cohorts that provide information, support, and role models for success. Occupational college administrators reported that the use of these three kinds of structures is intended to improve students' information, reduce their mistakes, and improve their likelihood of successful degree completion, and our analyses provide support for their contentions. Similarly, when community colleges adopt these structures—as in the case of health programs—we find that their students' information is actually better than at occupational schools.

We must, nonetheless, be cautious about our inferences. Information and confidence are, of course, not the same as actual degree completion. Still, one cannot help but wonder whether the differences in students' information and confidence contribute to prior findings that community colleges

have lower degree completion rates than some occupational colleges (Bailey et al., 2003; see also Note 1 in this article). Moreover, each kind of analysis has potential shortcomings. Our small sample of interviewed students could be unrepresentative, and occupational college administrators' reports could be distorted by self-interest. Although the regression analyses indicate strong significant associations between college type and student perceptions, a direct causal influence is not the only possible interpretation. Still, although no single analysis is sufficient to establish causality, the weight of multiple sources of evidence pointing in the same direction makes causality plausible and perhaps even probable.

It is important to recall that community colleges have a different mandate than occupational colleges do. As a broad public resource, community colleges often encourage exploration and offer a wide range of options. It would be a radical step for community colleges to offer all three kinds of structures on a large scale, especially given the resource requirements for such procedures. Focusing budget cuts on advising services should be examined, however, and stressing unstructured choice may ill serve some kinds of students. If further research finds that the structures identified here increase students' likelihood of degree completion, they will deserve serious consideration.

Some may worry that such structures deprive students of sufficient choice, but our survey finds that only 19% of all occupational college students reported that the school did not give students enough course choices (only a little more than the 13% of students who reported this in community colleges). Indeed, the interviews suggest that, for many students, given their limited resources and time for college, completing the degree quickly and efficiently is often more important than exploration. Students reported that they are happy to have clear-cut course requirements and did not complain about restricted freedom of electives. As one occupational college student explained, "It's nice . . . not having to worry about what classes to take, knowing that it's all plotted out for you." For students who lack information and for whom mistakes can be very costly, structures that reduce information needs and the risk of mistakes may justify limitations on choice.

The lessons of this study may extend beyond colleges. High schools have increasingly emphasized choice and electives, but "shopping mall high schools" have many shortcomings (Powell, Farrar, & Cohen, 1985). Extending that critique, the present study suggests that the problems may be especially great for disadvantaged students, but some of these problems may be reduced through alternative structures.

This article described three kinds of structures that colleges could implement, and it presented empirical findings about colleges with these structures. We found that students in 2-year colleges have ambitious goals, but they often lack found crucial information about what actions will help

them to achieve their goals, as is also true for high school students (Schneider & Stevenson, 1999). We presented evidence suggesting that college structures can reduce the information problems that interfere with students' accomplishment of their goals. The evidence suggests that these structures should be added to the menu of policy alternatives that deserve further consideration.

Notes

1 National Center for Education Statistics (NCES; 2001) data show that, between 1976 and 1997, the total percentage of fall enrollments who were racial minorities increased from 13% to 24% in 4-year colleges, and from 20% to 32% in 2-year colleges. Enrollments among students over 24 years of age increased from 28% of total fall enrollments in 1970 to 41% in 1998 (NCES). Similarly, the number of high school seniors from the lowest SES and achievement quartiles who enroll in a postsecondary institution within 10 years of finishing high school has more than doubled since 1960 (Wong & Rosenbaum, 2003).

2 According to data collected by the Illinois Board of Higher Education (2002), the ratio of AA graduates to freshman enrollees is much higher in private 2-year colleges than in their public counterparts (Jenkins, 2002). We calculated the ratio of the number of associate's degrees granted in the academic year 2001–2002, divided by freshman enrollment in the fall of 1999. This gives students 3 years, which is about the time that completion takes in community colleges. This assumes fairly stable enrollment patterns and degree completion patterns, which is roughly true but violated in some instances, and not in systematic ways. To smooth out the erratic changes in freshman enrollment and degrees conferred, we include a 3-year average in parentheses when numbers are available (i.e., 1999–2002 AAs/1997–1999 entrants). We find that the 1-year (3-year moving average, when available) ratio ranges between a low of 7% (9%) and 13% (14%) in five of our community colleges; 28% in one; and not computable in one. (These rates are consistent with those computed by Orfield, 1984.) At our private colleges, the rates vary from 45% (47%) to 69% (66%) in four of the schools, but they lagged in two others, at 18% (20%) and 24% (30%), and could not be computed in one. Note that the private colleges in our sample have higher degree-to-enrollment ratios than the community colleges despite the lower SES backgrounds and lower achievement of their students (cf. Table 1).

These calculations suggest some important conclusions. First, these are the best data about individual schools that are available for many schools. However, the data are not very good, so it is likely that students cannot get good information for making their enrollment decisions. Second, because the national BPS survey followed students, regardless of what institutions they were in, the BPS estimate of 26% (Bailey et al., 2003) is probably the best indication of community college degree completion, although it is likely to be lower in many urban areas.

3 All names are pseudonyms.

4 Given the categorical nature of the dependent variable, ordered logistic regression may be a more appropriate method for analysis. We conducted such analyses for each dependent variable discussed in Tables 3–5 (student information and confidence), and results were virtually identical to our OLS analyses with respect to direction and significance of effects. For ease of discussion, we report OLS findings.

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