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The research presented here indicates that exposure to organized and clear classroom instruction may have positive net effects on the probability of returning to an institution for the second year of college.

Effective Instruction and College Student Persistence: Some New Evidence

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An extensive body of correlational and experimental evidence has demonstrated the positive (and perhaps causal) link between different dimensions of effective postsecondary classroom instruction and both course-level learning and more general cognitive growth (for a summary of this research, see Pascarella and Terenzini, 1991, 2005). In this chapter, we present evidence from a longitudinal study of first-year students at a large research university to suggest that overall exposure to organized and clear classroom instruction may also have positive net effects on the probability of returning to an institution for the second year of college.

Effective Classroom Instruction

What constitutes effective classroom instructional practices or teacher behavior in postsecondary education is no longer a black box. Hundreds of correlational investigations have linked student perceptions of teacher behaviors such as instructional clarity, course organization and preparation, teacher expressiveness, and feedback to students to various measures of course-related knowledge acquisition or content mastery. A number of

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comprehensive meta-analytic or narrative reviews of this extensive body of research have been conducted (Braskamp and Ory, 1994; Cashin, 1999; d'Apollonia and Abrami, 1997; Feldman, 1997; Greenwald, 1997; Marsh and Dunkin, 1997; McKeachie, 1997). A distillation of these reviews (Pascarella, 2006) suggests three general conclusions about student perceptions of teacher classroom behaviors or instructional practices: (1) these perceptions are multi-dimensional, (2) they are reasonably reliable and stable, and (3) they have moderate positive correlations (for example, .30 to .50) with various measures of course learning such as course grade and course final examination.

Evidence on the validity of student perceptions of teaching is not limited to correlational investigations. Three of the dimensions of student perceptions of teaching with the strongest links to course achievement in correlational research—instructional clarity (clear explanations, effective use of examples), organization/preparation (effective use of class time, use of course objectives), and expressiveness (speaking emphatically, eye contact)—have been demonstrated with experiments (Hines, Cruickshank, and Kennedy, 1985; Schonwetter, Menec, and Perry, 1995; Schonwetter, Perry, and Struthers, 1994; Wood and Murray, 1999).

Although nearly all the research on student perceptions of teaching focuses on their link to specific course achievement, at least some evidence suggests that instructional organization, or a combination of instructional organization and clarity, might have positive impacts on more general academic competencies or skills not directly tied to a specific course. A group of researchers affiliated with the National Study of Student Learning (Pascarella and others, 1996) developed two five-item scales, termed instructional organization/preparation and instructional skill/clarity, that appropriated specific items appearing in previous research (Cohen, 1981; Feldman, 1989, 1994). Organization/preparation had constituent items such as “presentation of material is well organized” and “class time is used effectively” and had an alpha reliability of .87. Skill/clarity had constituent items such as “instructors give clear explanations” and “instructors make good use of examples to get across difficult points,” with an alpha reliability of .86. In a series of longitudinal investigations with samples from eighteen diverse institutions, the researchers found that the more students reported that the overall instruction they received in college was high on the organization/preparation scale, the greater their gains were on standardized measures of critical thinking, reading comprehension, and mathematics. These significant, positive associations persisted even after statistical controls were introduced for an extensive array of confounding influences, including precollege cognitive test scores, sex, race, academic motivation, full- or part-time enrollment, and patterns of specific types of coursework taken (Pascarella and others, 1996; Edison, Doyle, and Pascarella, 1998; Whitt and others, 2003). The failure of the instructional skill/clarity scale to also show significant, positive net associations with cognitive gains was in all likelihood due to its high correlation with the organization/preparation scale (.73). In other words, overall colle-

giate instruction seen by students as high in organization/preparation was also seen by students as high in skill/clarity. Indeed a recent investigation that combined the two scales into a ten-item measure of student perceptions of organization and clarity in overall instruction during college ($\alpha = .89$) found that the resultant composite scale had a net positive influence on gains on a measure of reading comprehension over three years of college (Bray, Pascarella, and Pierson, 2004).

Evidence does exist to suggest that student perceptions of teaching can be influenced by a number of extraneous course characteristics such as expected or actual course grade (Krautmann and Sander, 1999), academic discipline (Murray, Jelley, and Renaud, 1996), class size (Wachtel, 1998), and grading leniency (Greenwald and Gillmore, 1997). These extraneous influences may complicate matters when student perceptions of teaching are employed in faculty promotion or salary decisions. As Aleamoni (1999) suggested, however, this probably does not seriously detract from the usefulness of student perceptions of teaching in identifying classroom instructional practices that enhance course learning.

Exposure to Effective Instruction and College Persistence

A number of scholars have hypothesized that the nature and quality of classroom instruction may not only influence learning outcomes, but might also play a significant role in student decisions to persist at, or depart from, a particular college or university (Braxton, Hirschy, and McClendon, 2004; Braxton and McClendon, 2001–2002; Braxton and Mundy, 2001–2002; Tinto, 2006–2007). Indeed, a small body of evidence tends to support this hypothesis (Braxton, Bray, and Berger, 2000; Braxton, Milem, and Sullivan, 2000; Nora, Cabrera, Hagedorn, and Pascarella, 1996; Tinto, 1997). While most of this research has considered the effects of different classroom pedagogical approaches such as active or cooperative learning, the study by Braxton, Bray, and Berger (2000) considered the impact of specific teacher behaviors most directly. Guided by Tinto's conceptual model (1975, 1993) as framework for their study, Braxton, Bray, and Berger hypothesized that students exposed to faculty members who exhibit instructional organization and clarity in their classes frequently might be more confident and relaxed about their academic achievement. Thus, they might perceive that they have more time "to invest the psychological energy necessary to establish membership in the social communities of their college or university" (Braxton, Bray, and Berger, 2000, p. 216). Increased social integration, in turn, would enhance institutional commitment and intent to persist at the institution. Using measures of overall instructional organization and clarity essentially the same as Pascarella and others (1996), their findings were quite consistent with their hypotheses. Net of important confounding influences, overall exposure to organized and clear instruction enhanced both a measure of

student social integration and reported intent to reenroll at an institution for the second year of college.

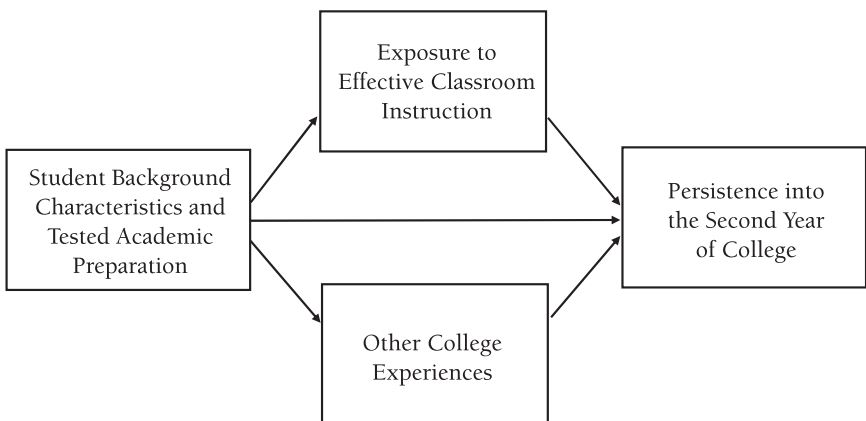
The study we summarize in the rest of this chapter builds on and extends the work of Braxton, Bray, and Berger (2000). It follows a sample of students beyond the end of the first year of college to determine if overall exposure to organized and clear classroom instruction increases the net probability of actual reenrollment at an institution for the second year of college.

Study Methods

In this section we briefly describe the study methods in terms of the guiding analytical model, institution and sample, study design, variables, and data analyses.

Analytical Model. The analytical model guiding the study was based on an extensive body of research evidence and is illustrated in Figures 4.1 and 4.2. (For a synthesis of this body of evidence, see sources such as Braxton, Hirschy, and McClendon, 2004; Goodman and Pascarella, 2006; Pascarella and Terenzini, 2005; and Tinto, 1993.) Figure 4.1 models the hypothesized total effect of effective classroom instruction (defined as organization and clarity) on persistence into the second year of college (the student reenrolled for the second year of postsecondary education at the study institution). The model assumes that persistence is a function not only of exposure to effective classroom instruction, but also of student background characteristics and tested academic preparation, as well as other college experiences. This set of variables includes such influences as race, sex, family social origins, and standardized test scores (for example, the ACT or

Figure 4.1. Total Effects Model



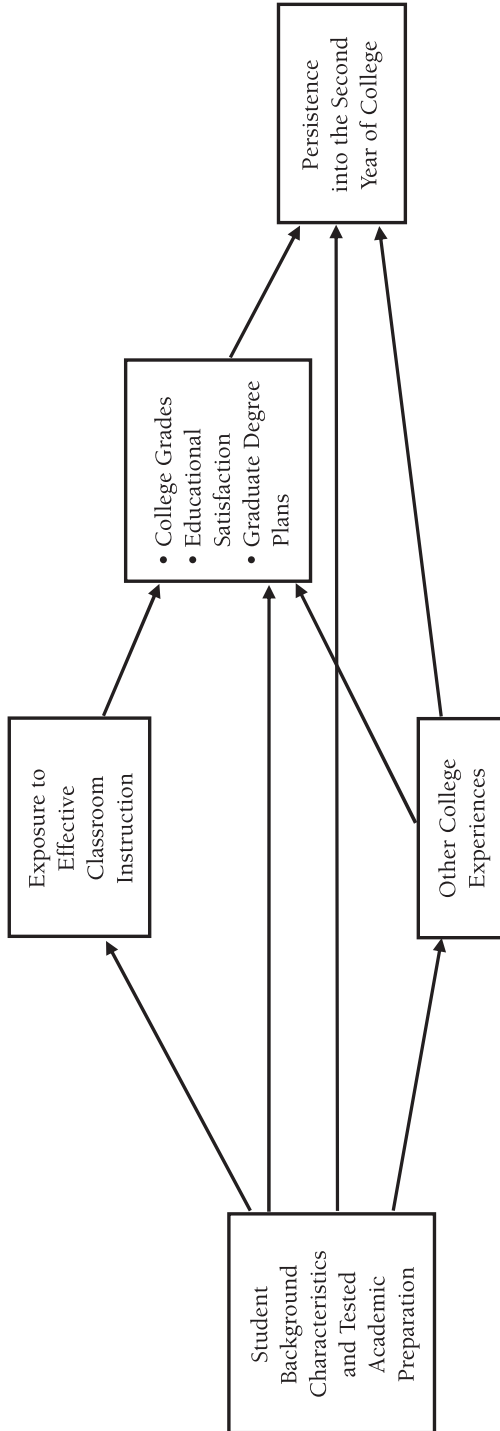
SAT). Other college experiences include such factors as financial aid, work during college, place of residence, and a range of social and academic involvements such as Greek affiliation, living-learning or honors programs, campus leadership positions, social drinking, attending on-campus lectures, and intramural sports. According to the conceptual model shown in Figure 4.1, we anticipated that with statistical controls in place for student background characteristics, precollege test scores, and other college experiences, overall exposure to organized and clear instruction during the first year of college would have a significant, positive total effect on the probability of enrolling for the second year of college (Alwin and Hauser, 1975).

The hypothesized indirect effects of exposure to organized and clear classroom instruction on persistence are modeled in Figure 4.2. According to this conceptual model, we anticipated that when measures of cumulative college grades, satisfaction with the education being received, and educational degree plans were added to the total effects model (Figure 4.1), two things would happen. First, net of all other influences, cumulative first-year grades, satisfaction with college, and degree plans would have a positive influence on persistence; and second, the direct positive influence of organized and clear instruction on persistence would become small and nonsignificant. This would indicate a positive indirect effect of overall organized and clear instruction on persistence, mediated through the positive effects of organized and clear instruction on cumulative grades, satisfaction with the education being received, and degree plans (Alwin and Hauser, 1975; Pascarella, 2006). We reasoned that if organized and clear instruction at the course level improved course-level learning, then overall exposure to organized and clear instruction would enhance cumulative academic achievement in college. We also hypothesized that exposure to effective instruction would have an affective dimension manifest in higher levels of student satisfaction with their undergraduate education. Finally, based on recent evidence that overall exposure to organized and clear instruction is positively linked to increases in educational aspirations (Pascarella, Wolniak, Pierson, and Flowers, 2004), we anticipated that the same relationship would exist in our sample.

Institution and Sample. The study was carried out at a large (thirty thousand students) public, primarily residential research university located in a small midwestern city. The institution is a member of the Association of American Universities and has a strong graduate and professional school emphasis, as well as a large undergraduate program. The sample consisted of 1,353 first-year students, about one-third of the first-year class enrolled at the institution. Although the sample was representative of the population of first-year students by race/ethnicity, women and individuals with higher ACT scores were overrepresented. To adjust for this bias, an algorithm was developed to weight the sample up to population values by sex and ACT composite score.

Study Design. The design of the study was longitudinal: data were collected at four points in time. The first data collection was prior to the

Figure 4.2. Direct and Indirect Effects Model



students' enrollment at the institution in late August 2005 and included demographic background characteristics and a standardized measure of academic preparation. The second data collection was during late March 2006, about the middle of the second semester of the students' first year of college. This data collection was in the form of a Web-based survey instrument that took about thirty minutes to complete. The survey collected data on demographic and background characteristics and extensive information on student college experiences and their engagement in a variety of activities and programs. The Web-based survey also asked students about their degree of satisfaction with the education they were receiving at the institution and their intended highest educational degree. The third data collection occurred during summer 2006 and consisted of student first-year cumulative grade point average (GPA). Finally, the fourth data collection point was early fall 2006, at which time we determined whether each of the students in the sample had reenrolled at the study institution.

Background Characteristics and Tested Academic Preparation. Student background characteristics consisted of sex, race/ethnicity, father's educational degree attainment, and mother's educational degree attainment. The ACT composite score (or its SAT equivalent) was used to test academic preparation. Sex, race, and ACT composite score were obtained from official university records held by the office of the university registrar. Father's and mother's levels of formal education were obtained from the survey. We did not use high school grades in the study because we were using first-year college grades in the analyses and wanted to avoid the interpretative problem of collinearity between the two variables.

Other College Experiences. The Web-based survey instrument collected extensive information on student first-year experiences in college other than exposure to effective instruction. These other first-year experiences included such factors as receipt of financial aid; hours per week of on- or off-campus work; first-year place of residence (fraternity or sorority house, off campus within three miles from campus, and off campus farther than three miles from campus versus campus housing); intended academic major (arts and humanities, education, engineering, journalism/communications, natural sciences, social sciences, nursing, and other versus business); and reported alcohol use during a typical two-week period. Also included as other college experiences was whether students participated in any of thirteen different experiences, including university-sponsored programs during the first year of college: career exploration activities, courses in common, college transition courses, first-year seminars, racial/cultural awareness workshops, Greek affiliation, university honors program, intramural sports, living-learning residences, on-campus lectures on political or social issues, out-of-class research projects with a faculty member, campus leadership positions, and leadership training experiences.

Exposure to Effective Classroom Instruction. Overall exposure to effective classroom instruction was defined operationally as exposure to

Exhibit 4.1. Constituent Items for the Instructional Organization and Clarity Scale

Scale stem: Below are statements about teacher skill/clarity as well as preparation and organization in teaching. For the most part, taking into consideration all of the teachers with whom you've interacted at [university name], how often have you experienced each? Response options: 5 = "very often"; 4 = "often"; 3 = "sometimes"; 2 = "rarely"; 1 = "never."

The scale score was computed as the average score for each item (mean = 3.789, standard deviation = .529).

Presentation of material is well organized.
 Teachers are well prepared for class.
 Class time is used effectively.
 Course goals and requirements are clearly explained.
 Teachers have good command of what they are teaching.
 Teachers give clear explanations.
 Teachers make good use of examples and illustrations to explain difficult points.
 Teachers effectively review and summarize the material.
 Teachers interpret abstract ideas and theories clearly.
 Teachers give assignments that help in learning the course material.

Note: Alpha reliability = .91.

organized and clear instruction. Information on student perceptions of exposure to organized and clear instruction was collected by means of a ten-item scale in the Web-based survey. The item on the survey presented students with the following stem: "Below are statements about teacher skill/clarity as well as preparation and organization in teaching. For the most part, taking into consideration all of the teachers with whom you've interacted with at [university name], how often have you experienced each?"

Students were presented with the same ten items of vetted reliability and validity used in studies described above (Braxton, Bray, and Berger, 2000; Bray, Pascarella, and Pierson, 2004; Edison, Doyle, and Pascarella, 1998; Pascarella and others, 1996; Whitt and others, 2003). All of the specific items are shown in Exhibit 4.1. The response options were: 5 = Very Often, 4 = Often, 3 = Sometimes, 2 = Rarely, and 1 = Never. Because prior research has shown that the separate five-item scales organization/preparation and skill/clarity are so highly collinear ($r = .73$; see Bray, Pascarella, and Pierson, 2004), we combined the ten items into a single scale: instructional organization and clarity. For the study sample, the internal consistency (alpha) reliability for this scale was .91—clearly supporting the contention that the ten items are in all likelihood measuring a single underlying instructional trait.

Cumulative College Grades. "Cumulative college grades" was defined operationally as a student's cumulative grade point average across the first two semesters of college. Data on this variable were obtained from the office of the university registrar.

Educational Satisfaction. The Web-based survey offered respondents a single item on which they could indicate their satisfaction with the education being received. The specific item was: "Overall, how satisfied are you with the education you are receiving at [institutional name]? The response options were 5 = Very Satisfied, 4 = Satisfied, 3 = Neither Satisfied nor Dissatisfied, 2 = Dissatisfied, and 1 = Very Dissatisfied. Because this variable was so positively skewed, we recoded it into two dummy variables, Very Satisfied and Satisfied, with the comparison group being Neither Satisfied nor Dissatisfied, Dissatisfied, or Very Dissatisfied.

Educational Degree Plans. This was a single item on the Web-based survey that asked students to indicate the highest academic degree they intended to earn in their lifetime. The response options were bachelor's degree, master's degree, law (J.D.), and doctorate (Ph.D., Ed.D., M.D.). The item was coded any graduate degree = 1 and bachelor's degree = 0.

Persistence into the Second Year of College. The persistence variable was defined operationally as whether a student reenrolled for the second year of postsecondary education at the study institution. It was coded 1 = reenrolled, and 0 = did not reenroll and was obtained from official records held by the university office of the registrar. Of the 1,353 students in the sample, 1,228 students (90.8 percent) reenrolled for the second year of college and 125 (9.2 percent) did not.

Data Analyses. The first step in the data analyses was to estimate the total effect of overall exposure to organized and clear instruction during the first year of college on persistence into the second year of college. For this, we used reduced form regression specifications (Alwin and Hauser, 1975) and, because the dependent variable was binomial (1 = reenrolled, 0 = did not reenroll) rather than continuous, logistic rather than linear regression. Persistence was regressed on the measure of overall exposure to organized and clear instruction and all background characteristics, ACT composite score, and other college experiences (see Figure 4.1). The second step in the analyses sought to determine the direct and indirect (or mediated) effects of organized and clear instruction on persistence. For this analysis, we added cumulative first-year college grades, satisfaction with the education being received, and educational degree plans to the reduced-form (total effects) specification described above (see Figure 4.2). According to our conceptual model, we expected that college grades, educational satisfaction, and degree plans would have a positive influence on persistence and that the positive total effect of organized and clear instruction on persistence would be reduced to nonsignificance. Thus, the enhancement of grades, satisfaction, and degree plans would mediate (or account for) the positive impact of organized and clear instruction on persistence.

To isolate which, if any, of the three mediating variables transmitted most of the indirect effect of exposure to organized and clear instruction on second-year persistence, we tested several models. Grades, satisfaction, and degree plans were added to the total effects equation in different combinations

to determine if the addition of any single mediating variable reduced the estimated effect of organized and clear instruction to nonsignificance. Because of the large sample size ($N = 1,353$), we used .01 as the critical level of statistical significance in all analyses.

Results of the Study

The estimated total and direct effects of overall exposure to organized and clear instruction on persistence into the second year of college are summarized in Table 4.1. Columns 1 and 2 in Table 4.1 show the results of the total effect estimate. As the table indicates, in the presence of statistical controls for student background characteristics, ACT composite score, and an extensive array of other first-year college experiences (see note a in Table 4.1), overall exposure to organized and clear instruction significantly ($p < .001$) increased the probability of a student reenrolling for the second year of post-secondary education at the study institution. The odds ratio in column 2 indicates that net of the influence of all other variables in the total effect equation, a one-point increase on the instructional organization and clarity scale increased the odds of reenrolling from even (1.00/1.00) to 1.78/1.00. This can be thought of as a 78 percent improvement in the odds of reenrolling. Since the aggregate sample standard deviation of the organized and clear instruction scale was .529 (recall that an individual's scale score was the average score on each item), this means that an increase of one standard deviation on the scale increases the net odds of reenrolling from even (1.00/1.00) to 1.41/1.00 (the increase in odds, or $.78 \times .529$). This can be interpreted as a 41 percent increase in the odds of reenrolling.

Columns 3 and 4 in Table 4.1 (direct effect, model 1) summarize the estimated direct causal effect of overall exposure to organized and clear instruction on persistence when cumulative first-year grades and graduate degree plans were added to the total effect equation (summarized in columns 1 and 2). It is not surprising that first-year grades had a strong and statistically significant positive effect on the probability of second-year enrollment, although graduate degree plans did not. What is more important is that even with additional controls made for academic achievement and degree plans, exposure to organized and clear instruction continued to exert a significant, positive influence on the likelihood of reenrolling at the institution for the second year of college. Indeed, the magnitude of the net effect of organized and clear instruction on persistence was reduced only a trivial amount from the total effect equation (regression coefficient reduced from .578 to .544, odds ratio reduced from 1.78 to 1.72) and remained statistically significant at $p < .005$. With additional controls for grades and degree plans, an increase of one standard deviation in exposure to organized and clear instruction produced an increase in the odds of reenrolling from even (1.00/1.00) to 1.38/1.00. Thus, somewhat contrary to expectations, our findings suggest that overall exposure to organized and clear instruc-

Table 4.1. Estimated Total and Direct Effects of Exposure to Organized and Clear Instruction on Persistence into the Second Year of College

Variable	Total Effect ^a		Direct Effect ^a Model I		Direct Effect ^a Model II	
	(1) Regression Coefficient (Standard Error)	(2) Odds Ratio	(3) Regression Coefficient (Standard Error)	(4) Odds Ratio	(5) Regression Coefficient (Standard Error)	(6) Odds Ratio
Instructional organization and clarity scale	.578** (.174)	1.783	.544* (.181)	1.724	.179 (.200)	1.196
Cumulative first-year grade point average			1.417** (.189)	4.132	1.394** (.194)	4.031
Graduate degree plans			.284 (.241)	1.328	.215 (.333)	1.240
Educational satisfaction						
Very satisfied ^b					1.266** (.333)	3.546
Satisfied ^b					-.091 (.292)	.913

^aLogistic regression equations also include controls for ACT composite score; sex; race; father's degree attainment; mother's degree attainment; whether one was receiving financial aid; hours per week of on-campus work; hours per week of off-campus work; first-year place of residence (fraternity/sorority house, off campus within three miles of campus, and off campus farther than three miles from campus versus campus housing); intended major (arts and humanities, education, engineering, journalism/communications, natural sciences, social sciences, nursing, and other versus business); reported binge drinking during a typical two-week period (once, twice, three to five times, six or more times versus never); and participation in thirteen other experiences or programs during the first year of college (career exploration, courses in common, college transition courses, first-year seminars, racial/cultural awareness workshops, Greek affiliation, university honors program, intramural sports, living-learning residences, on-campus lectures on political or social issues, out-of-class research projects with a faculty member, held a campus leadership position, and leadership training experiences). All results reported are based on the weighted sample adjusted to the unweighted sample size to obtain correct standard errors.

^bComparison group is students who indicated "neither satisfied nor dissatisfied," "dissatisfied," or "very dissatisfied."

* $p < .005$. ** $p < .001$.

tion has a significant, positive net effect on persistence that is independent not only of student background characteristics, ACT scores, and an extensive array of other college experiences, but also of cumulative first-year college grades and graduate degree plans.

It was only when the dummy variables representing satisfaction with the education one was receiving were added to the equation (columns 5 and 6, direct effect, model II) that the total effect of organized and clear instruction on persistence was dramatically reduced (from .578 to .179) and became

statistically nonsignificant. Such a finding indicates that of the estimated indirect effect of organized and clear instruction on persistence (.578 – .179, or .399, see Table 4.1, columns 1 and 5), about 91 percent (.544 – .179, or .365, see Table 4.1, columns 3 and 5) was mediated through increased satisfaction with the education one was receiving at the study institution.

We tested the statistical significance of the indirect effect of exposure to organized and clear instruction through satisfaction using Sobel's procedure for the significance of mediated effects (Preacher and Leonardelli, 2001). This test indicated that a statistically significant ($p < .01$) and positive indirect effect of organized and clear instruction on persistence was mediated through the dummy variable that compared students who were "very satisfied" with the education they were receiving to a group composed of those who indicated that they were "neither satisfied nor dissatisfied," "unsatisfied," or "very dissatisfied." In short, net of other factors, students exposed to organized and clear instruction were more likely to report being "very satisfied" with the education they were receiving at the institution. In turn, being "very satisfied" with one's educational experience during the first year of college improved the likelihood of reenrolling at the institution for the second year of college significantly.

Finally, we conducted a series of analyses to determine if the direct effects of exposure to organized and clear instruction on persistence differed significantly in magnitude for men versus women, white students versus students of color, and students with different ACT scores. These analyses were all nonsignificant at the .01 level. There was a marginally significant ($p < .05$) trend for the positive effects of organized and clear instruction to be somewhat more pronounced for women than for men. However, there was no evidence to suggest that the effects of exposure to organized and clear instruction on persistence differed in more than chance ways for white students versus students of color or for students with different ACT scores.

Summary and Conclusions

In this chapter, we have reviewed a small but growing body of evidence suggesting that exposure to effective classroom instruction in college has implications beyond the facilitation of knowledge acquisition in a specific course. Exposure to overall organized and clear instruction across the classes one takes in college appears to enhance not only the development of general cognitive skills not directly linked to a specific course but also the intention to reenroll at a specific postsecondary institution. Extending the work of Braxton, Bray, and Berger (2000), we described a study suggesting that overall exposure to organized and clear instruction during the first year of postsecondary education at a large, public research university significantly increased the probability of reenrollment at that institution for the second year of college.

The study employed a ten-item scale of demonstrated reliability and validity that measured a student's reported overall exposure to organized and clear instruction across all of their first-year courses and teachers. Controlling for background characteristics, ACT score, and an extensive array of other first-year experiences and involvements, overall exposure to organized and clear instruction had a significant ($p < .001$) positive total effect on reenrolling for the second year of college. An increase of one standard deviation on the instructional organization and clarity scale was associated with a net increase in the odds of reenrolling from even (1.00/1.00) to 1.41/1.00. Exposure to organized and clear instruction continued to have a significant ($p < .005$) net impact on reenrollment decisions even after taking into account the additional influence of cumulative first-year college grades and graduate degree plans. With these two variables added to the total effect equation, an increase of one standard deviation on the instructional organization and clarity scale was still linked with a net increase in the odds of reenrolling from even (1.00/1.00) to 1.38/1.00. Moreover, although there was marginally significant evidence to suggest that the unmediated positive effects of organized and clear instruction on persistence were somewhat more pronounced for women than men, we uncovered no evidence to suggest that such effects differed in magnitude for white students versus students of color or for students with different levels of pre-college academic preparation.

Our analyses suggest that most of the causal influence of overall exposure to organized and clear instruction on reenrollment decisions is indirect, being mediated (or accounted for) by level of satisfaction with the first-year education one is receiving. Net of other influences, overall exposure to organized and clear instruction during the first year of college increases the likelihood that a student will be "very satisfied" with the undergraduate education he or she is receiving. In turn, this satisfaction has a net positive influence on the likelihood one will reenroll for the second year of undergraduate education at an institution.

Although our findings are somewhat limited in generalizability by the single-institution sample, they might have reasonably clear implications for policy or practice. A substantial body of evidence has indicated that the frequency and quality of faculty members' nonclassroom interactions with students play a significant role in students' decisions to persist at a particular college or university (Pascarella and Terenzini, 1991, 2005). Our findings underscore the salience of faculty behaviors in student persistence decisions by suggesting that it is not just their nonclassroom interactions with students that count, but also their actual classroom instructional behaviors. Exposure to instructional behaviors that enhance learning (organization and clarity) might also increase the probability of a student's persistence at an institution by increasing his or her sense of overall satisfaction with the education being received. Perhaps of equal, if not greater, importance to

policymakers is the implication that delivering organized and clear classroom instruction might not be merely a function of an individual faculty member's innate skills or propensities. Rather, as Weimer and Lenze (1997) suggested, faculty members can learn many of the constituent skills and behaviors required to implement organized and clear instruction in their courses. A variety of methods and mechanisms has been employed on many campuses to provide faculty members with assistance in developing and improving teaching effectiveness. This study provides evidence of the potential impact of such efforts on student success as measured by retention and could argue for their expansion. Policies requiring faculty to engage in development activities to improve effectiveness are unlikely at most colleges and universities, but providing faculty, administrators, and students with evidence that good teaching matters for student persistence could help create a climate in which activities to improve teaching are a taken-for-granted aspect of faculty work. From this perspective, our findings lend support to the potential institutional benefits derived from the investment of resources in programs designed to enhance teaching effectiveness, particularly to the extent that these programs help faculty hone sound pedagogical skills such as instructional organization and clarity.

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