



**PARSING THE FIRST YEAR OF COLLEGE
YEAR 3 PROGRESS REPORT**

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by

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YEAR 3 PROGRESS REPORT ON “PARSING THE FIRST YEAR OF COLLEGE”

Focus of the Research

Parsing the First Year of College is an effort to map the comprehensive influences shaping student learning and success during the first year of college among students entering 34¹ four-year institutions nationwide. The study seeks answers to two questions:

1. What are the direct and indirect effects of a wide array of students’ first-year experiences, faculty activities and culture, and institutional structures, practices, and policies on first-year student development in critical thinking, writing, academic competence, social and interpersonal competence, civic engagement, and student persistence into the second year?
2. Do those effects vary depending on students’ race/ethnicity, sex, socioeconomic status, or parental educational attainment?

Research Status

1. *Activities Undertaken During the 2008 Calendar Year*

a. Data Collection Completed

All data collection was completed, and file-merging is near completion. Participating institutions provided information on:

- i) *First-year student population characteristics*. Participating schools provided the distribution their first-year student populations with respect to gender, race/ethnicity, full-/part-time status, and ACT test quartiles. These data are used for:

Weighting: The population distributions allow creation of *post-hoc* weights to adjust for response bias. When applied, these weights will produce a sample of respondents representative of the population of first-year students on each campus with respect to the characteristics listed above. Weights also correct for differences in the response rates across institutions.

Measures of selectivity: ACT quartile scores allow for a nuanced set of institutional selectivity measures.

- ii) *Second-year persistence indicator*. This indicator, reflecting whether participating students returned to their college for a second year, is one of the project’s three major student outcomes (the others are ACT Collegiate Assessment of Academic Proficiency scores in critical thinking and writing skills).

¹ For various reasons, this number subsequently dropped to 32 institutions

iii) *Institutional characteristics*. Information from the National Center for Education Statistics' Institutional Postsecondary Education Data System (IPEDS) system was used to create a campus-specific database. Information includes size; type of control; Carnegie Classification; institutional expenditures on student services, tuition, and fees; and faculty salaries. These variables will augment information on campus academic and student affairs structures, practices, and policies.

b. Cleaning, Coding, and Preparing Datafiles for Merging

i) *Faculty Data*. The Project now has data from 5,667 faculty members at 45 institutions (34 Parsing schools and 11 institutions participating in the Wabash National Study of Liberal Arts Education via a collaboration described in our annual report for Year 2). Factor analyses were conducted and scales created for use in future data analyses.

ii) *Chief Academic Officer and Chief Student Affairs Officer Data*. Project staff created nearly two-dozen scales from survey data provided by each campus' Chief Academic and Chief Student Affairs Officers. The scales reflect the extent to which a campus has policies and practices known from previous research to positively affect student outcomes. These scales were remerged with other institution-level data (from IPEDS and aggregated faculty data).

iii) *Student Data*: As indicated in our Year-2 Annual Report, the student data collection process, file management and cleaning, and file merging has been *far* more complex than initially anticipated. Initial efforts (in early 2008) to merge student data from several different sources into a single dataset yielded fewer complete cases than our initial reports from campuses suggested we should have. A student-by-student and school-by-school investigation revealed significant missing-data problems relating to students' ACT score data, a critical control and analytical variable for our studies. Project staff spent an enormous number of hours working with ACT staff to revise matching variables and algorithms. Merging revised ACT datafiles with CAAP and NSSE files suggests that these procedures will, indeed, "save" a number of previously "lost" cases. This process requires data handling at the campus level. As of this reporting, the cleaning and merging of student data are fully complete for half of the participating institutions. We anticipate completion of the merging for the remaining campuses in late January.

c. Data Distribution to Campuses

- i) In February 2008, Project staff prepared NSSE data, codebook, and analysis syntax files and distributed them to the 16 institutions that participated in the Parsing Project but not as part of the national NSSE data collection. With this distribution, all participating institutions have now been sent their campus-specific NSSE, CAAP, and faculty data.
- ii) Detailed, campus-specific summaries of faculty responses, including comparisons with the norms for three institutional categories (bachelors, masters, or doctoral), were generated. After final formatting touch-ups are completed the reports will be sent to schools shortly after the new year. [See Appendix A for sample pages from the report tables. N.B.: Not all format codes carried forward for inclusion in this report, so some distortions appear in the sample that are not in the original report. Text explaining statistical material and how to use it is being prepared.]
- iii) Only one promise to participating campuses now remains unfulfilled. After all student level data have been merged and cleaned, each campus will receive a comprehensive dataset that will include information on each participating student's pre-college characteristics and academic preparation (from ACT test scores and student profile), college experiences (from NSSE), writing and/or critical thinking skills (from CAAP), and persistence. These datasets will be sent to campuses this semester.

2. *Project Findings*

As noted above, the complexity of the student datafiles and the extended file-cleaning and merging activities required for all Project datafiles far exceeded expectations and consumed most of our time. Nonetheless, the faculty, chief academic officer (CAO) and chief student affairs officer (CSAO) datasets have already formed the basis for conference papers and proposals.

Reason et al. (2008; see below) examined the relative effects of individual faculty member and institutional characteristics on the extent to which instructors purposefully promote encounters with difference for their first-year students (e.g., providing opportunities for students to encounter people who differ from them and ideas that differ from their own). Findings suggest that *who* a faculty member is matters less than *what* a faculty member does. Instructors who promoted their students' classroom encounters with difference (known to be effective in promoting student learning) relied on a number of pedagogies that encouraged active student involvement and a reciprocal teaching-and-learning relationship among the students. Moreover, such instructional practices were more likely to be found at institutions where instructors "actively" assessed student performance (e.g., required multiple drafts of papers, provided frequent and detailed feedback) and where the institutional culture emphasized teaching in faculty hiring and promotion and tenure decision-making. These findings indicate the complexity we anticipated in trying to explain comprehensively the complex set of factors that shape students' experiences and, ultimately, their first-year college success.

Cox et al. (2009) analyzed the factors that influence both the frequency and nature of students' interactions with faculty members. Their findings indicate that the roots of faculty members' dispositions to interact with students appear to be shaped far more by personal considerations than by environmental or faculty culture considerations. Indeed, organizational policies that require all faculty members to teach first-year students may actually have adverse educational consequences.

In a third study, intended to identify policies that foster an institutional “culture of teaching,” Cox, McIntosh, Reason, and Terenzini (2009) used data from 5,280 faculty members at 44 institutions to examine connections between institutional policies and faculty members' perceptions of the institution's emphasis on teaching. A series of multi-level models suggest that academic policy variables have small and largely insignificant relationships to faculty members' perceptions of their institution's emphasis on teaching. Traditional institutional factors, such as selectivity and Carnegie classification, drive the predictive power of all models.

3. Potential Audience/Stakeholders for the Work and Plan for Reaching Them

The initial findings above, and those of analyses planned using the fully integrated dataset (information on students' experiences and performance; faculty members' practices and beliefs; organizational programs, practices, and policies in both academic and student affairs; and institutions characteristics) will be of interest to a wide array of stakeholders. Scholars will find both conceptual and analytical material derived from a new, comprehensive framework for studying college effects on students, a model that takes into account the *multiple forces* operating in *multiple settings* to shape student learning and persistence. Previous studies have concentrated on only a comparative handful of those factors at a time. In addition, where previous studies of between-college effects have relied almost exclusively on such readily available, but predictively weak, institutional traits (e.g., size, control, selectivity), this study will provide a far more sophisticated set of analyses of the effects of *internal* institutional structures, operations, and policies on students' experiences and, indirectly, learning outcomes. Faculty members will find information to guide the review, evaluation, and development of their campus' curriculum and instructional practices, as well as analyses of the potential academic and cognitive learning opportunities existing in students' out-of-class experiences. Academic and student affairs administrators will find important information for enhancing institutional effectiveness, including a comprehensive map of the educationally significant aspects of the first year over which institutions have some programmatic and policy control. Knowing what experiences and dynamics are significantly involved in student learning can promote more informed program review, revision, and development, as well as more effective resource allocation. Finally, findings have the potential to promote effective public policy. Equal access to a college education has been a state and federal priority for over 40 years. But “access” can also refer to opportunities for *all* students to realize the personal, social, economic, and occupational *benefits* of a college education. This study explores whether the effects of the college experience may vary depending on students' gender, race/ethnicity, or socioeconomic status. American colleges and universities are clearly under-achieving in providing full access to the benefits of college completion, and students' success in their first year is a necessary, if not sufficient, condition for full access to those benefits.

4. Plans for Archiving and Providing Access to Study Data

We expect that this study's dataset will be available to doctoral students in Penn State's Higher Education Program for their dissertation research, as well as for conference papers and journal articles. Agreements have also been made with Drs. Ernest Pascarella (University of Iowa) and Charles Blaich (Wabash College) to exchange comparable data from the Parsing Study and the Wabash National Study of Liberal Arts Education. The two studies share a number of characteristics, including their use of NSSE and the CAAP critical thinking module, the first year of student data collection, and the use of the faculty, chief academic affairs officer, and chief student affairs officer surveys developed for the Parsing Study. We anticipate collaboration among the Co-PIs of both studies with their doctoral students and post-doctoral researchers.

Changes in Plans

Cleaning, merging several student datasets, and preparing the comprehensive dataset to include student, faculty, administrator, and institutional data has made it impossible for us to maintain the timeline in our proposal. Consequently, a no-cost extension requested was granted (Oct. 22, 2008); analytical and dissemination activities will continue until December 31, 2010. Only one other change has been made in the original plan. A proposal reviewers recommended adding financial aid information to the database. After receiving a lukewarm response from institutional representatives to the proposal, and taking the advice of Penn State's Director of Financial Aid, we abandoned plans to ask institutions for students' unmet financial need. The availability of financial data (albeit more limited) from other sources, however, we will still permit partial exploration of the effects of students' financial circumstances on their first-year experiences and performance. For example, the Parsing Study's Supplemental Survey includes several questions about students' receipt of financial aid, confidence in their ability to pay for college, and the extent to which finances have interfered with various educationally-relevant activities.

Publications and Presentations

Reason, R. D., Cox, B. E., Lutovsky-Quaye, B. R., & Terenzini, P. T. (2008, November). *Faculty and institutional factors that promote student encounters with difference in first-year courses*. Paper presented at the 2008 conference of the Association for the Study of Higher Education, Jacksonville, FL. [Submitted *Review of Higher Education*. See Appendix B]

Cox, B. E., Terenzini, P. T., Reason, R. D., McIntosh, K. L., & Lutovsky-Quaye, B. R. (2009, April). *Factors shaping faculty-student contact outside of class*. Paper to be presented at the meeting of the American Educational Research Association, San Diego, CA

Cox, B. E., McIntosh, K. L., Reason, R. D., & Terenzini, P.T. (2009, May). *Developing a culture of teaching: Academic policies and faculty perceptions*. Paper to be presented at the meeting of the Association for Institutional Research, Atlanta, GA.

Terenzini, P. T., & Reason, R. D. (2009, January). Linking student engagement and essential learning outcomes: Evidence and caveats. Panelists in a session on the same topic to be presented at the annual meeting of the American Association of Colleges and Universities, Seattle, WA.

Appendix A

SAMPLE TABLES FROM REPORTS TO CAMPUSES
SUMMARIZING LOCAL RESULTS TO FACULTY SURVEY

Center for the Study of Higher Education
Pennsylvania State University
Parsing the First Year of College Study

SPRING 2006 FACULTY SURVEY COMPARISON
REPORT FOR SAMPLE STATE UNIVERSITY

PROFILE OF RESPONDENTS

Item Number and Content	Old Siwash University	Norms for . . .		
		Bachelor's[1]	Master's ¹	Doctoral ¹
Response Rate:				
Responses Received	213	1,439	2,081	2,479
Target Population	929	2,976	4,200	11,339
Response Rate[2]	43%	48%	52%	42%
Sampling Error[3]	2%	1%	1%	1%
for Percentages (Overall)				
1. Gender:				
Male	54%	54%	52%	62%
Female	46%	46%	48%	38%
Total	100%	100%	100%	100%
2. Racial/ethnic background:				
Black, non-Hispanic	2%	2%	6%	3%
American Indian or Alaskan Native	0%	0%	0%	0%
Asian/Pacific Islander	5%	3%	4%	7%
Hispanic	2%	3%	2%	2%
White, non-Hispanic	88%	91%	86%	86%
Multiracial[4]	1%	2%	1%	1%
Non-resident alien	0%	0%	0%	0%
Total	100%	100%	100%	100%

3. Highest earned degree:				
Bachelor's	1%	1%	1%	2%
Master's	36%	23%	32%	21%
Doctorate	62%	75%	65%	75%
First-Professional	1%	1%	2%	3%
Total	100%	100%	100%	100%
4. Discipline/Field in:				
Humanities/Fine Arts	30%	44%	28%	23%
Natural/Physical Sciences	14%	21%	17%	23%
Social Sciences	12%	19%	14%	13%
Professional	25%	10%	25%	28%
Other	19%	6%	15%	14%
Total	100%	100%	100%	100%
5a. During Fall '06 term, employed at this institution:				
Full-time	90%	92%	91%	90%
Part-time	10%	8%	9%	10%
Total	100%	100%	100%	100%
5b. If part-time, taught in at least 3 terms during the last 3 years at this institution:				
Yes	9%	7%	7%	8%
No	0%	2%	2%	2%
Not applicable	90%	92%	91%	90%
Total[5]	100%	100%	100%	100%
6a. During F'06 term, was primarily a:				
Faculty member or Instructor	91%	96%	93%	93%
Administrator	7%	4%	6%	6%
Staff member	2%	0%	1%	1%
Total	100%	100%	100%	100%
6b. Academic Rank:				
Professor	15%	32%	25%	27%
Associate Professor	30%	26%	22%	28%
Assistant Professor	16%	26%	28%	21%
Instructor/Lecturer/Other	39%	16%	24%	23%
Total	100%	100%	100%	100%

Item Number and Content	Response Options	Column Percentages			
		Old Siwash University	Norms for . . .		
			Bachelor's	Master's	Doctoral
<p>9. Please indicate your level of agreement with each of the following statements. (Coding scale: 1 = Strongly disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly agree)</p>					
9a. Institution systematically assesses students' first-year experiences	Strongly disagree	2%	4%	4%	5%
	Disagree	7%	17%	15%	18%
	Undecided	14%	16%	24%	27%
	Agree	54%	46%	44%	40%
	Strongly agree	22%	16%	13%	10%
	Total	100%	100%	100%	100%
	Mean	3.86	3.52	3.45	3.32
	Standard deviation ⁶	0.94	1.09	1.04	1.05
Effect size⁷		0.31	0.40	0.51	
Significance ⁸		***	***	***	
9b. Assessment results used to strengthen first-year courses, programs, and services	Strongly disagree	4%	7%	6%	7%
	Disagree	8%	18%	18%	17%
	Undecided	33%	25%	34%	37%
	Agree	45%	38%	35%	32%
	Strongly agree	9%	12%	8%	7%
	Total	100%	100%	100%	100%
	Mean	3.45	3.30	3.22	3.16
	Standard deviation ⁶	0.92	1.10	1.01	1.01
Effect size ⁷		0.14	0.23	0.29	
Significance ⁸			**	***	

Sample Table Reporting Faculty Responses on a Scale

Cross-Divisional Collaboration (Alpha = .894)

Scale Statistics	Old Siwash University	Norms for . . .		
		Bachelor's	Master's	Doctoral
Mean	3.52	3.52	3.47	3.27
Standard deviation	0.82	1.02	0.98	0.95
Effect size ^a		0.00	0.05	0.26
Significance ^b				***

^a Effect size = difference between institution mean score and norm group mean divided by the norm group's standard deviation.

^b Statistical significance: *p < .05 **p < .01 ***p < .001

^c Alpha reflects scale's internal consistency reliability. Can range from .00 to 1.0, with .60 or higher considered acceptable.

Scale Component Items

- Student Affairs staff have the support of faculty (12e)
 - Faculty and Student Affairs staff work closely together in orienting first-year students (12f)
 - Faculty and Student Affairs staff work closely together in ways that promote first-year students' success (12g)
-

Appendix B

**FACULTY AND INSTITUTIONAL FACTORS THAT PROMOTE
STUDENT ENCOUNTERS WITH DIFFERENCE IN FIRST-YEAR COURSES**

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FACULTY AND INSTITUTIONAL FACTORS THAT PROMOTE STUDENT ENCOUNTERS WITH DIFFERENCE IN FIRST-YEAR COURSES

Abstract

Research clearly indicates that faculty members have the potential to influence the student learning outcomes through their pedagogical practices (Pascarella & Terenzini, 1991, 2005). We know less about what influences faculty members' choices to employ specific pedagogical practices. This study, based on data from 2,853 faculty members who teach courses that serve primarily first-year students on 45 campuses nationwide, identifies the individual, organizational, environmental, programmatic, and policy factors that individually and collectively influence faculty members' decisions to engage in one particularly pedagogical practice—requiring students to engage with difference.

* * *

Faculty members' classroom behaviors and personal characteristics have been linked to a wide variety of positive student outcomes (Pascarella & Terenzini, 1991, 2005). Pascarella and Terenzini (2005) concluded that instructor behaviors such as clarity and organization of lessons, prompt and thorough feedback to students, availability and rapport with students, and effective use of class time are all related to college students' acquisition of content knowledge and higher-order cognitive skills. Chickering and Gamson (1987) highlighted seven good practices for undergraduate education that emphasized active learning, involvement in cooperative (vs. competitive) learning activities, high quality faculty-student interaction, and prompt, thorough feedback from faculty to students. Sanford (1962, 1967) has suggested that students learn from being challenged by new ideas and by encounters with people different from themselves. Research supports that proposition, indicating that encouraging students to engage with "difference" (broadly defined) promotes student learning (Pascarella & Terenzini, 2005).

This study sought to identify the personal and institutional factors that influence the extent to which faculty members adopt one specific good pedagogical practice: "promoting encounters with difference" in their first-year courses. The study identifies factors that predict whether faculty members employ classroom strategies that encourage students to engage with different ideas, perspectives, and people.

Literature Review

Three bodies of literature are relevant to this study: student outcomes associated with encounters with difference, the role of classroom activities in encouraging such encounters, and finally the personal and institutional characteristics that can influence faculty members' use of effective teaching practices. The study assumes that encouraging faculty members to employ a specific pedagogical practice will increase the likelihood that students will learn through their engagement with difference.

The choice of language to represent our central construct was intentional, but we also acknowledge the related constructs that go by any number of other labels. Our use of

“difference” instead of “diversity” reflects the overwhelming tendency for recent higher education literature to associate the term “diversity” with racial and ethnic issues (Milem, Chang, & Antonio, 2005). Indeed, this body of research figures prominently in our literature review as it has made a major contribution to our understanding of the college student experience. However, we use both terms here to reference any of a broad range of experiences involving some degree of heterogeneity and “newness.” Our broad definition recognizes the multiple forms of diversity: demographic (race, gender, sexuality, socioeconomic status), attitudinal (religion, sociopolitical beliefs), and intellectual (academic controversy, conflicting evidence). Thus, regardless of the specific terminology, our outcome variable represents a variety of faculty practices that “promote student encounters with differences” of many types.

The Benefits of Student Encounters with Difference

As American college campuses have grown more diverse, much political and scholarly work has considered how the changing demographics of the academy would affect the college experience. Supporters of affirmative action policies have argued that there are inherent educational benefits to attending a diverse institution. Such benefits do not occur automatically, however. Instead, structural diversity (Hurtado, Milem, Clayton-Pederson, & Allen, 1998) makes it possible for students to encounter, interact with, and engage people and ideas different from themselves (Gurin, 1999, n.d.), although it does not guarantee such encounters will occur.

Indeed, student engagement with a diverse mix of people and ideas – whether formal or informal, whether inside or outside of the classroom – has a positive effect on numerous student outcomes. Increased interaction with diverse people and ideas is associated with greater cultural awareness (Milem, 2003), student satisfaction (Villalpando, 2002), democratic beliefs and intellectual advancement (Gurin et al., 2002; Gurin, 2002), and a host of other positive student outcomes (Hu & Kuh, 2003; Pascarella & Terenzini, 2005; Smith et al., 1997). In fact, the “evidence is almost uniformly consistent in indicating that students in a racial/ethnically or gender-diverse community, or engaged in a diversity-related activity, reap a wide array of positive educational benefits” (Terenzini, Cabrera, Colbeck, Bjorklund, & Parente, 2001, p. 511). One can group such benefits into two general categories: attitudinal and moral or academic and intellectual.

Attitude and moral reasoning effects of encounters with difference. Much of the recent research on the effects of cross-racial interactions has focused on the influences such interactions have on student attitudes, beliefs, and moral decision making. Perhaps the most consistent findings suggest that contact has a positive effect on students’ multicultural competence and respect for diversity. Whether such interaction occurs because of informal peer or friendship groups (Antonio, 2001, 2004; Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1996), diversity workshops (Pascarella et al., 1996; Whitt, Edison, Pascarella, Terenzini, & Nora, 2001), or formal coursework, particularly in women’s or ethnic studies (Astin, 1993; Gurin et al., 2002; Saenz, Ngai, & Hurtado, 2007), students’ engagement with people different from themselves increases cultural awareness and openness to diversity (understood to include diverse ideas as well as people). While most studies have focused on issues of racial or ethnic differences, at least one study (Liang & Alimo, 2005) suggests that student interaction with lesbian, gay, or bisexual students while in college also leads to more positive attitudes toward LGB people. Thus, it

appears that regardless of the nature of the difference, students who encounter others who are “different” tend to develop more open, respectful attitudes.

Other evidence suggests similar conclusions may also be drawn regarding the effect of diverse encounters on students’ moral reasoning. Hurtado, Mayhew, and Engberg (2003) found that students taking a course that addressed diversity-related issues and included teaching practices that encouraged cross-racial interaction had significantly higher gains in moral-reasoning scores on the Defining Issues Test than students who took a more traditional management course. These gains remained even after controlling for students pre-course moral reasoning.

Yet another family of research focuses on encounters with diversity in preparation for students’ participation in a heterogeneous democratic society. For example, Gurin (1999) found that students’ interactions with diversity had a positive relationship with a number of outcomes, including students’ beliefs and behaviors consistent with democratic citizenship. Gurin et al. (2002) extended that analysis and found that interactional diversity – the extent to which students actually engaged with people different from themselves – was positively related to students’ engagement as citizens, even after they left college. This effect held true for students of all races. Hurtado Engberg, and Ponjuan (2003) attempted to parse out the specific college activities that affect students’ “perspective-taking, belief that conflict enhances democracy, and the importance students place on social action engagement” (p. 5). With a variety of controls in place, students’ interactions with diverse peers had the strongest effect on these democracy-related outcomes. Together, these three studies indicate that both the *quantity* and *quality* of students’ encounters with difference are critical to the achievement of important student outcomes.

Intellectual effects of encounters with difference. Although the evidence connecting student encounters with diversity and subsequent changes in attitudes toward diversity is well established, the connection between diverse encounters and students’ critical thinking skills is less obvious and less researched. Initially growing out of the organizational theorists’ concerns about the threat of “groupthink” (Janis, 1971), decades-old research indicates that heterogeneous groups tend to outperform their homogenous counterparts (Cox, 1981). In collegiate settings, a few recent experimental studies have provided confirmation that individuals engage in more complex critical thinking when they participate in groups whose members hold other perspectives or opposing viewpoints.

antonio et al. (2004) present strong experimental evidence indicating that exposure to divergent opinions in a collegiate setting increases students’ complex thinking. In a study of 357 white students at three universities, antonio et al. grouped like-thinking students to discuss a controversial sociopolitical issue. Also in the group was one confederate whose purpose varied (per the experimenters’ design) to either agree or disagree with the majority position on the controversial issue. Students exposed to divergent opinions during discussions engaged in more complex critical thinking during a writing assignment immediately afterward. These findings are largely consistent with experimentally derived conclusions reached by Gruenfeld and colleagues (Gruenfeld, Martorana, & Fan, 2000; Gruenfeld, Thomas-Hunt, & Kim, 1998) who indicate that encountering different opinions encourages more critical and creative thinking by majority opinion holders.

These experimental data join other correlational research to suggest that encounters with difference can improve cognitive activities. Supplementary analysis from the Antonio et al. (2004) study found that those students generally reporting more inter-racial contact demonstrated more complex critical thinking and that the effects of long-term contact with diversity appear to be greater than a one-time discussion amid diverse peers/opinions. Hu and Kuh (2003) provide additional correlational evidence to support these findings, suggesting that engagement in diversity-related experiences is positively related to gains in critical thinking and problem solving skills. Thus, by promoting student engagement with a diverse population of people and their ideas, colleges and universities can shape the college experience in ways that will simultaneously *open* and *sharpen* students' minds.

Instructors, Courses, and Student Outcomes

Of course, the most prominent mechanisms by which an institution of higher education can shape its students' learning experiences is the academic coursework it offers. Indeed, among the most consistent findings in studies of college impact is that students' classroom activities relate to a number of student outcomes (Astin, 1993; Pascarella & Terenzini, 1991, 2005). For example, improved critical thinking, increased persistence intentions, and increased multicultural awareness have been reported for students who actively engage in classroom activities (Braxton, Milem, & Sullivan, 2000; Kuh & Vesper, 1997; Terenzini, Cabrera, Colbeck, Parente, & Bjorklund, 2001) or who work collaboratively with other students to complete assignments (Johnson, Johnson, & Smith, 1998; Springer, Stanne, & Donovan, 1999). While individual students control the amount of effort they commit to their courses, instructors control the classroom conditions that facilitate educationally effective activities. Thus, instructors are uniquely positioned to ensure that classroom experiences contribute to students' learning and development – precisely the outcomes associated with students' positive encounters with diverse peers and differing opinions.

Nevertheless, many faculty members who recognize the value of incorporating diversity into their classrooms may be reluctant to incorporate diversity-related-content into their courses (Maruyama & Moreno, 2000). Thus, professors may still not know what they can do to increase students' encounters with diversity (broadly construed) in their classes. Some may believe that diversity is an issue to be dealt with primarily in specific classes or departments (e.g., women's or ethnic studies programs). Some recent evidence (Saenz et al., 2007) supports that belief, suggesting that women's and minority studies classes are significantly related to students' positive interactions with diversity and, likely, subsequent student outcomes; however, like Gurin et al. (2002), Saenz et al. found that the positive effects of these classes were almost completely mediated by students' in-class engagement with diverse people and perspectives. So while diversity-related classes or programs appear to influence student engagement and outcomes, it is students' class-specific *encounters* with diversity, not just coursework within a particular field or department, which affect students' outcomes.

It might also seem intuitive that classes with a diverse group of students would be best able to facilitate classroom interaction with diversity. This same logic underscores most arguments for structural diversity at the institution level (Gurin, 1999; n.d.; Gurin et al., 2002).

At least one study has directly examined the viability of this hypothesis at the level of individual classes. In a study of engineering students, Terenzini et al. (2001) found that class-specific levels of structural diversity – the mix of racial/ethnic groups in a particular class – had a small, but direct effect on students’ self-reported gains in “problem solving and group skills” (p. 518). But it was students’ activities in the classroom, more than any static measure of structural diversity, that was most strongly related to student outcomes. Once again, like the studies by Gurin and her colleagues, Terenzini et al. found that it is students’ level of *engagement* with people and ideas different from one’s self, more than mere shared presence, that facilitates student learning. Thus, regardless of the particular course title or its structural composition, *all* college courses may have the potential to foster student learning and development by promoting students’ encounters with difference.

Factors affecting faculty pedagogies

Although every course offers opportunities for professors to facilitate student interactions with diversity, many factors affect the specific content or pedagogies used by a particular instructor. For example, individuals’ demographic characteristics may be related to faculty-member behavior, pedagogy, and content decisions. Certain faculty – particularly those who are racial minorities or women – are more likely than their counterparts to both *value* good teaching and *practice* effective pedagogies (Kuh, Nelson Laird, & Umbach, 2004; Lindholm, Szelenyi, Hurtado, & Korn, 2005). So too are women and minorities more likely to infuse diversity-related materials into the classroom (Mayhew & Grunwald, 2006; Milem & Astin, 1993).

Teaching practices may also differ by employment status. Bland et al. (2006), using data from the 1999 National Survey of Postsecondary Faculty, found a relationship between tenure status and faculty activities, productivity, and commitment to an institution. For example, in doctoral institutions, tenured faculty put more total time into teaching activities than do untenured faculty, though untenured faculty tend to hold more frequent office hours. However, more broadly, research on the relationship between faculty rank/experience and faculty teaching practices has produced mixed results (Feldman, 1983), though Marsh (2007) reports more recently that instructors’ evaluations remain relatively stable across time, even after faculty members have gained more than a decade of experience.

Beyond these individual factors, it appears that institutional and departmental cultures can shape professors’ teaching practices. An institutional culture of teaching—involving a shared commitment to teaching excellence and meaningful assessment of faculty teaching (Paulsen & Feldman, 1995)—can encourage faculty members’ use of effective teaching practices (Spencer, et al., 1989). A more proximal cultural influence may occur at the level of the academic department. For example, Mayhew and Grunwald (2006) found some departmental differences in the extent to which faculty incorporate diversity into their classrooms, while Volkwein and Carbone (1994) suggest a departmental culture can influence faculty behavior and student outcomes. Whether at the departmental or institutional level, however, Umbach and Wawrzynski (2005) report that “the cultural context created by faculty behaviors and attitudes was related positively with student engagement, student perceptions of environment, and student self-reported gains” in learning and development (p. 169).

In sum, the research literature suggests a relatively straightforward argument upon which we will build our conceptual framework. Clearly, students benefit from encounters with diversity. Moreover, all instructors can facilitate such encounters within their classrooms. Finally, the extent to which individual professors actually *do* promote encounters with difference appears to depend, in part, on both individual characteristics and the normative peer culture in which they operate. If that is the case, then institutions might effectively examine not only the instructional support services they provide individual instructors, but also the organizational structures, processes, and policies that collectively create an environment or culture that encourages certain kinds of behaviors while discouraging others. Our argument is that both organizational and individual faculty member characteristics should be taken into account in efforts to promote students educationally productive encounters with diversity. Thus, our study uses multilevel modeling to examine the personal and cultural factors that drive faculty efforts to promote student encounters with difference, in hopes that we can identify efficient organizational means to increase the use of this effective pedagogical technique.

Conceptual Framework

Data come from a larger study of a wide array of forces shaping first-year student outcomes. The conceptual framework for that study expands upon Astin's Inputs-Environment-Outcomes approach (Astin, 1993) and Terenzini, Springer, Pascarella, and Nora's (1995a; 1995b) model of college effects on student outcomes. These conceptual frameworks hypothesize that students come to college with a range of demographic, personal, and academic background characteristics and experiences that shape students' engagement with various aspects of their institution. Those involvements are themselves influenced by a variety of curricular, classroom, and out-of-class experiences and conditions. The framework for the current study suggests that all of these dynamics occur within, and are mediated by, an often-overlooked fourth domain, the institutional context; this setting comprises an institution's internal organizational characteristics, structures, practices, and policies, as well as the campus's faculty and peer cultures and environments (Authors, 2005).

The study is based on survey data from faculty members at 45 colleges and universities regarding their personal characteristics, pedagogical preferences, professional activities, and perceptions of their campus's approach to the first year of college. This information affords a vehicle to operationalize their institution's organizational context, something frequently overlooked in the college impact literature or is typically assessed through such variables as type of control, size, mission, or selectivity. Most studies indicate that such variables are too remote from the student experience to have much, if any, effect on student learning (Astin, 1993; Pascarella & Terenzini, 1991, 2005).

Kuh and his colleagues (Kuh, Kinzie, Schuh, Whitt, & Associates, 2005), however, suggest how institution-level policies, practices, and climates can influence student engagement. Our own research (Authors, 2006, 2007) reinforces these conclusions, finding both faculty and student "culture" variables that predict both student experiences and outcomes. The present study seeks to extend that research by identifying faculty and institutional characteristics that influence the extent to which instructors facilitate students' encounters with difference.

Research Methods

Faculty members at participating institutions were defined as all tenured, tenure-track, and non-tenure track instructional staff of all ranks (i.e., professor, associate professor, assistant professor, instructor, or lecturer), regardless of their full- or part-time status. Because the larger project focuses on first-year student outcomes, the definition excluded faculty members in programs that serve only graduate students, teach only evening or continuing education division courses, or hold adjunct, clinical, or emeritus titles. In most cases, the entire faculty population (as defined) on a campus was invited to participate. At institutions where the size of the faculty prohibited a census, a simple random sample of 500 faculty members was drawn. Of the 12,822 faculty members contacted, after removal of cases with 20% or more of the variables missing and subsequent imputation using the EM algorithm, usable responses were received from 5,667 (44.2%) of them. The sample used in this analysis includes 2,853 faculty members who teach courses that serve primarily first-year students and who had values for all of the variables that comprise our five pedagogy scales (see Table 1). Respondents from each institution were weighted to be representative of all faculty members at that institution with respect to gender, race, field, and academic rank. Weights were also applied to adjust for differing response rates across institutions.

Questionnaires gathered information on respondents' personal characteristics, pedagogical preferences, professional activities, and perceptions of their campus's approach to the first year of college. The conceptual framework and existing empirical research guided development of survey items and scales. Our institution's Survey Research Center used both paper and web-based instruments (four waves of contacts) to collect data.

Scales were developed using a series of principal components analyses (with varimax rotations) of related sets of items. Only components loading .40 or higher were retained; items loading above .40 on two or more factors were excluded. Scale scores were developed by averaging a respondent's responses on the component items.

Criterion Variable. The criterion variable was a factorially derived, classroom-related scale, labeled "Promoting Encounters with Difference," consisting of four items (see Table 2). Faculty members indicated how often (never, sometimes, often, very often) they "provided opportunities for first-year students to learn about people who differ from them in background characteristics (e.g., gender, race)" and "attitudes or values (e.g., politics, religion)." The survey also asked faculty members how often they require first-year students to "examine ideas/perspectives other than their own." Finally, faculty members also reported how often they required first-year students to "wrestle with ideas or points of view that differ from their own." The scale's alpha = .90.

Predictor variables of primary interest. Factorially-derived scales operationalized faculty behaviors and culture. Based on our conceptual framework, eight scales were included in this analysis. Four scales (*Learning through Application, Community Service, Feedback to Students, Active Teaching and Assessment*) reflect faculty reports of their pedagogical and feedback practices in courses they teach for primarily first-year students. Along with these teaching scales, several traditional demographic variables (e.g., race, sex) were included in the analysis. Also

included was a measure of the faculty member's time spent at the institution. Though the two measures are highly correlated, we used time at the institution in place of the instructor's rank for two reasons. First, because the time variable is coded continuously it contains more variability than the dummy-coded faculty rank variable, leading to both a more precise and more stable parameter estimates. Second, if an institutional or faculty culture is to have an effect on instructors' teaching behaviors, it follows logically that the magnitude of such an effect would depend, at least in part, on the extent of one's exposure to that culture.

The final four scales (*Planned Approach to Student Success*, *Socializing New Students*, *Faculty Awareness of Student Resources*, *Institutional Emphasis on Teaching*) represent the faculty members' perceptions of institutional policies, practices, and ethos regarding first-year students and their experiences. Table 2 provides a description of each scale along with the component items of each.

Because we were interested in how faculty members behave in response to specific environments, scale scores were used in two ways. An individual-level score was computed for each faculty member on the four teaching scales (*Learning through Application*, *Community Service*, *Feedback to Students*, *Active Teaching and Assessment*) to represent the faculty member's self-reported teaching activities. The mean of the scale scores for faculty members on a campus represented the several dimensions of a campus's organizational culture. All eight scales were used in this manner.

Analytic Procedures

Because this study explored the influence of both individual (Level 1) and organizational (Level 2) characteristics on an individual-level outcome, a multilevel modeling technique in SPSS was used (Painter, n.d.; Peugh & Ender, 2005). This procedure resembles and produces results similar to those of the hierarchical linear modeling (HLM) approach developed by Raudenbush and Bryk (2002). Analyses followed the iterative HLM strategy recommended by Raudenbush and Bryk and other proponents of multilevel analyses (Ethington, 1997; Porter, 2005). All Level-1 variables were centered around their institution's mean score on a given item. Group-mean centered Level-1 variables were used because their use provides consistent, interpretable measures of Level-2 variance, allowing us to accurately measure the percent-variance-explained at both Level-1 and Level-2 (Raudenbush and Bryk). When interpreting Level-1 coefficients, keep in mind that these estimates refer to an individual's deviation from the campus mean for a given variable. When interpreting Level-2 parameters, remember that they represent a variable's effect on the *average* faculty member at a given institution.

We first estimated the unconditional model, which allows for partitioning the variance between the individual-level and institution-level. We then estimated a Level 1-only model in two steps, first estimating the effects of traditional demographic variables (i.e., sex, race, time at institution) and then a model with those variables and the teaching scales. This step allowed us to estimate the importance of *who* a faculty member was (demographic variables) relative to *what* a faculty member does (teaching scales). Through a series of estimations we identified and retained only the statistically significant main and interaction effects for Level 1 variables. After identifying the statistically significant Level 1 effects, we entered Level 2 variables in a 2-step process. First, we entered institutional characteristics that are generally fixed or outside of administrative control. Second, we added the scales describing the institutional and faculty cultures at the institution. Again, through an iterative estimation process, we eliminated non-significant terms to identify the most parsimonious multilevel model. Finally, we estimated a fully interactive model in which we crossed Level 1 variables with Level 2 variables.

Findings

Unconditional Model. Multilevel modeling permits comparison of the between-institution and within-institutions effects on the criterion variable (Raudenbush & Bryk, 2002). Estimating a fully unconditional model (i.e., one with no Level 1 or Level 2 predictors) tests the assumption that at least some of the variance in the dependent measure is attributable to institutional differences.

Results of the unconditional model (Model 1) produced a grand mean for the outcome variable of 2.57 (SE = .04), on a scale of 1 to 4, indicating that faculty members across institutions report “sometimes” to “often” employing strategies that encourage first-year students to encounter difference. Individual-level variables accounted for the vast majority of the variance in the extent to which faculty members purposefully facilitated students' encounters with difference. The variance at the faculty-member level (sigma-squared) was .785, accounting for 93.1 percent of the total variance. The institution level variance (tau) was .058, or 6.9 percent of the total. This contribution of between-institution variance was greater than 5 percent and statistically significant ($p = .001$)—two indicators that multilevel analysis is warranted (Porter, 2005; Raudenbush & Bryk, 2002).

Level 1 models. We then estimated a series of models with only individual-level predictors included. The first of these models (Model 2), which included only the three demographic covariates (sex, race [white/non-white], and years at the institution), accounted for only a three percent (3%) reduction in the Level 1 variance.

A second Level 1 model that included the four teaching and pedagogical scales (*Learning through Application, Community Service, Feedback to Students, Active Teaching and Assessment*) along with the demographic variables allowed us to partition the variance accounted for at the individual level between demographic characteristics and pedagogical practices. This second model accounted for about 29 percent of the Level 1 variance (26% more than the demographic-only model). In this second model, sex, years at the institution, and the four scales were all statistically significant predictors of the outcome.

Finally, we examined the interaction effects among Level 1 variables. Through a series of model estimations, beginning first with a model that included all Level 1 interactions and subsequently removing non-significant effects, we estimated the most parsimonious Level 1-only model. In this model, sex, years at the institution, and the four scales were again statistically significant predictors of the outcome. Two interactions remained statistically significant throughout this process—race x *Learning through Application* and race x *Student Feedback*. A positive relationship between the race x *Learning through Application* interaction and the outcome indicates that White faculty members who engage in application exercises in the classroom are more likely to report *promoting encounters with diversity*, whereas the negative relationship between the race X *Student Feedback* interaction and the outcome indicates that White faculty members who solicit student feedback are less likely to report *promoting encounters with diversity*. This final Level 1-only model (Model 3) accounted for 29.5 percent of the within-institutional variance; the addition of the Level 1 interaction effects added minimal explanatory power to the overall model.

Level 2 models. We next entered the Level 2 variables. Because the variance estimates at Level 2 are more stable when the Level 1 variables are constant (Raudenbush & Bryk, 2002), we included the statistically significant Level 1 main effects and interactions in each Level 2 model. First, we added only the institutional identity and structural characteristics that are largely outside of immediate administrative control – size, type, control (public/private), selectivity (median ACT composite), and urbanicity. Results of this model indicate that size and selectivity are not statistically significant predictors of an institution's average score on the outcome; these variables were subsequently dropped from the model. Thus, with institutional type, control, and urbanicity retained as predictors, the final institutional identity model (Model 4) explained 15.8 percent of the Level 2 variance. Next, we added the eight Level 2 scales to the model (Model 5). Two of the scales, *Institutional Emphasis on Teaching* and *Active Teaching and Assessment – school mean*, reached levels of statistical significance, as did two of the institutional type variables: Carnegie research type and town location. The variable indicating public control floated in and out of statistical significance, but fell out of the final model. No Level-2 interaction terms were significant. This model with cultural variables accounted for an additional 61.4 percent of the Level 2 variance – more than three times the amount of variance attributable to fixed institutional factors. Thus, the final model accounted for 77.2 percent of the between institution variance when compared with the variance attributable to Level 2 in the final Level 1-only model.

Cross-level interactions. The final step (Model 6) in this multilevel analysis estimated a model that included those individual- and institutional-level predictor variables previously identified as statistically significant and several cross-level interaction terms. Seven individual-level variables (sex, race, years at the institution, *Learning through Application*, *Community Service*, *Feedback to Students*, and *Active Teaching and Assessment*), both Level 1 interactions, and two institution and faculty culture variables (*Institutional Emphasis on Teaching* and *Active Teaching and Assessment – school mean*) were entered in the model. The three institution type variables (Carnegie class, urbanicity, and control) were also included. We also added the interactions between Level 1 and Level 2 variables in this fully conditional model. We then completed an iterative process in which non-statistically significant predictor variables were

removed and the analysis was rerun until we achieved the most parsimonious model possible. In the final equation, all seven individual-level variables and the two measures of institutional and faculty culture had statistically significant main effects. Statistically significant effects also remained for research institutions (a positive effect) and schools located in towns (a negative effect); institutional control remained non-significant. Two cross-level interactions were statistically significant: race X public control and time at institution X *Institutional Emphasis on Teaching*.

Comparing the individual-level variance of this final model with the variance attributable to Level 1 in the unconditional model provides one estimate of the explanatory power of the final model. Compared to the unconditional model, the individual level variance declined from .785 to a residual value of .548, a reduction of 30.2 percent. Recall that the Level 1 only model with no cross-level interactions explained 29.8 percent of the variance; thus the cross-level interactions that remained statistically significant added little explanatory power to the model.

Comparing the institution-level variance of the final model with the institution-level variance in the final Level 1-only model (Model 3) allows estimation of the extent to which our models explain the variations between institutional averages in the frequency of instructor promotion of student encounters with difference. Recall that the variance attributable to institutional differences in the Level 1-only model was .057. The residual variance at the institutional level in the final model was .013. The final model, thus, accounted for approximately 77.2 percent of the original institution-level variance ($[(.057-.013)/.057] = .772$). In other words, nearly all of the institutional variability in the extent to which instructors promote student encounters with differences is attributable to the institution's type, location, emphasis on teaching, and the average use of active teaching and assessment techniques by its faculty. The addition of the cross-level interactions did not improve the model's predictive power.

Limitations

Our study is constrained by at least three limitations. First, this analysis grew out of two larger studies – the Parsing the First-Year of College Study and the Wabash National Study of Liberal Arts Education – focused on the first year of college. Thus, all pedagogical practices refer to faculty-members' use of these practices in courses that typically enroll large numbers of first-year students. Such courses, which tend to be introductory in nature and larger in size, may not be typical of the courses taught to more advanced students. Nonetheless, the first year may set the tone for the rest of a college student's experience. Engaging in more active learning processes and encountering more diverse people and opinions during the first year may have lasting effects on students' connection to the institution and participation in effective educational practices.

Two sets of variables not included in this study may have considerable effects on faculty behavior. First, although our surveys asked faculty members to describe their institution's general emphasis on teaching, the surveys did not solicit information about the individual faculty-members' beliefs. Faculty members' philosophies of education or beliefs about their position at the institution could play a role in shaping their academic behaviors (Einarson & Clarkberg, 2004; Golde & Pribbenow, 2000).

Instructor behavior may also be affected by one's field or discipline. Indeed, Mayhew and Grunwald (2006) report some department-level differences in the extent to which faculty members incorporate diversity into their courses. However, we did not include field in our predictive models for both conceptual and statistical reasons. Conceptually, field cannot logically be restricted to either an individual-level or institution-level influence. Rather than being nested within an institution, disciplinary fields exist across and beyond the institutions that house their departments or employ their faculty. Regardless, our initial models attempted to include field as a predictor variable (at either level 1 or level 2), but results were largely unstable and uninterpretable. In an effort to confirm our findings in light of this limitation, in supplemental analysis we split the sample by field and reran the final, fully-interactive model for each field. Indeed, the results suggest that faculty behavior is influenced by one's field/discipline. Nonetheless, as discussed below, this supplementary analysis largely supported our substantive conclusions.

Finally, one result is perplexing. In all models, the relationship between instructors' use of *Learning through Application* pedagogies and the extent to which they promoted encounters with difference is statistically significant, but negative. This finding runs counter to the evidence related to the other three teaching practices. The source of this anomaly remains unclear. Though correlations between the teaching scales are small or moderate in magnitude ($0.1 < r < 0.4$), the counter-intuitive sign for the *Learning through Application* parameter may be a statistical artifact resulting from multicollinearity. A statistically significant and positive bivariate correlation between *Learning through Application* and *Promoting Encounters with Difference* provides some support for the belief that multicollinearity may be influencing the direction of the relationship.

Summary and Conclusions

A substantial body of literature indicates that instructors' pedagogical practices have a direct and pronounced effect on student learning (Pascarella & Terenzini, 1991; 2005). This study identified individual and institutional characteristics that influence the extent to which faculty members use one effective pedagogical strategy – promoting student encounters with difference. Findings indicate that the vast majority of the variance in the extent to which faculty members engage in this strategy is accounted for by individual factors. Importantly, however, faculty demographic variables accounted for little of the variance in the outcome variable. Although gender and time at an institution remained statistically significant in the models, they accounted for less than three percent of the variance in the outcome variable with the combined sample. In fact, even when the analysis was run separately for each field/discipline, individual demographics never accounted for more than 4.9% of the individual-level variance in the outcome measure. Rather, across all fields, an individual's teaching practices were three to twenty times more powerful as predictors than were an individual's demographic characteristics. That is, regardless of one's field, gender, race, or experience, *who* a faculty member is matters less than *what* that individual does.

As one might expect, faculty members adopting others sound pedagogies are also likely to facilitate student encounters with difference. Findings indicate faculty members who engage

in active teaching and assessment practices – relying less on lecturing and multiple choice tests in favor of requiring more frequent student presentations, in-class discussions, and multiple iterations of student papers – are also more likely to encourage encounters with difference. Similarly, faculty members who engage students in community service activities and provide frequent and detailed feedback also encourage encounters with difference.

That effective pedagogical practices are related to one another should come as no surprise; however, the nature of their association can be explained in at least two different ways. First, it might be that good teachers are “all-around” teachers, adopting multiple types of good pedagogical practice. Second, it may also be that these instructional approaches represent effective *mechanisms* through which instructors can encourage encounters with difference. For example, in-class discussions can offer a forum allowing expression of multiple viewpoints, and community service activities may put students in contact with people different from themselves and their peers. Regardless of which explanation one accepts, promoting encounters with difference need not be an independent, disconnected, or add-on component that constitutes "yet one more thing" that professors are supposed to do. Rather, institution-sponsored professional development programs can help professors leverage the good pedagogical tools they may already possess - like active teaching and assessment - to promote student encounters with difference in the classroom. Our findings offer some support for this suggestion.

Specifically, four institution-level measures had direct effects on whether faculty members promoted encounters with difference in their first-year courses. Faculty members at research-oriented universities were more likely, while faculty members at institutions located in a town were less likely, to promote encounters with difference. As with the individual demographic variables, however, these institutional identity measures accounted for little variance in the outcome. More importantly, two scales representing an institution's culture were significant; an institution's overall means on the *Active Teaching and Assessment* and the *Institutional Emphasis on Teaching* scales were positively related to whether instructors encouraged their first-year students to engage with difference.

These findings have practical implications for higher education administrators who wish to encourage their faculty members to adopt curricular and pedagogical practices likely to promote student learning. The research literature indicates that colleges and universities, through their organizational effects on faculty dispositions and behaviors, can purposefully shape (if only indirectly) student experiences and learning (see, for example, Kuh, Kinzie, Schuh, & Whitt, 2005). Our findings suggest a synergy may be at work. Faculty members who adopt other effective pedagogical practices also encourage their students to engage with difference. Moreover, by hiring faculty members who engage in active teaching pedagogies, institutions can increase the likelihood that faculty members will promote students' encounters with difference in two ways. First, hiring an effective teacher will make an immediate impact on students' classroom experiences because the newly hired teacher will likely encourage encounters with difference in the classroom. Second, such a hire will contribute to the faculty's general perception that the institution emphasizes teaching, which may have an indirect effect on faculty culture and teaching practices.

Although the emphasis an institution places on teaching is a significant predictor of faculty pedagogical behavior in our study, it is the *Active Teaching and Assessment* scale that is the most powerful and most consistent predictor of promoting encounters with difference. The scale has an individual-level main effect and an institution-level main effect, both of which are positive and larger than any of the other scales. In fact, in supplemental analysis in which our models were run separately for each field, *Active Teaching and Assessment* remained statistically significant as an individual-level effect for all field; an institution's mean score on the scale was statistically significant for three of the four fields (but not social sciences). Thus, whether through targeted individual interventions or campus-wide instructional development efforts,, institutions may experience considerable corollary benefits when they promote active teaching and assessment practices – regardless of an instructor's field of practice.

Recalling the conceptual framework that guided our study, we can conclude that the power of a predictor appears to be related to its proximity to the faculty member. The least powerful predictors of faculty behavior related to promoting encounters with difference were institutional characteristics, such as Carnegie Classification or institutional location. More important were variables considered part of the institutional culture—an institutional emphasis on teaching—and variables related to faculty culture—the institution's mean for *Active Teaching and Assessment*. The most powerful predictors of faculty behavior were individual level measures of teaching practice. So, engaging in positive behaviors, in this case effective teaching practices, and being part of a culture that reinforces these behaviors, is much more important than the type of institution where one works. As noted earlier, it is *what* a faculty member and an institution do and support, rather than what an individual or institution *is*, that appears to influence faculty behavior.

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Table 1
Sample Description

	Unweighted Frequency / Mean	Weighted Frequency / Mean
Sex (Female = 1)	41.8%	40.7%
Race (White = 1)	81.5%	86.5%
Years at Institution	17.00 (10.96)	16.58 (11.01)
Learning Through Application	2.85 (0.77)	2.89 (0.77)
Community Service	1.28 (0.55)	1.30 (0.56)
Student Feedback	3.41 (0.71)	3.41 (0.72)
Active Teaching Assessment	2.56 (0.70)	2.59 (0.69)
Planned Approach	3.60 (0.96)	3.58 (0.95)
Socializing Students	3.64 (0.71)	3.58 (0.71)
Faculty Awareness of Student Resources	3.70 (0.94)	3.60 (0.97)
Institutional Emphasis Teaching	2.76 (0.93)	2.54 (0.95)
Promoting Encounters with Difference	2.57 (0.91)	2.58 (0.91)

Note: Standard errors are in parentheses.

Table 2
Specification of the Variables in Analytical Models

Criterion Variable

Promoting Encounters with Difference: A four-items scale, where 1="never" and 4="very often," indicating how often the faculty members "provide opportunities for your first-year students in your classes to learn about people who differ from them in 'background characteristics (e.g., gender, race)'" or "attitudes or values (e.g., politics, religion)," how often they "give your first-year students assignments that require them to examine ideas/perspectives other than their own", and how often they "ask first-year students in your classes to wrestle with ideas or points of view that differ from their own" (alpha = .902)

Level 1 Variables

Demographics

Sex: 0=male, 1=female

Race: 0=non-white, 1=white

Years at Institution: self-reported years at current institution, including current year

Teaching practice scales

Active Teaching and Assessment: A six-item scale, where 1="not at all" and 4="a great deal," indicating the extent faculty members, in courses that serve primarily first-year students (excluding first-year seminars), use the following: "lecture" (reverse coded), "in class discussion," "multiple drafts of written work," "papers and other open-ended assignments," "student presentations," and "multiple-choice tests/exams" (reverse coded). (alpha=.751)

Learning through Application: A five-item scale, where 1="not at all" and 4="a great deal," indicating the extent faculty members, in courses that serve primarily first-year students (excluding first-year seminars), use the following: "collaborative/cooperative learning," "experiential/problem-based learning," "group projects," "hands-on experiences," and "assignments or exercises focusing on application." (alpha=.815)

Community Service: A two-item scale, where 1="not at all" and 4="a great deal," indicating the extent faculty members, in courses that serve primarily first-year students (excluding first-year seminars), use the following: "community service for extra credit only," and "Community service as an integral part of the course." (alpha=.630)

Feedback to Students: A two-item scale, where 1="not at all" and 4="a great deal," indicating the extent faculty members, in courses that serve primarily first-year students (excluding first-year seminars), use the following: "frequent feedback to students on their progress," and "detailed feedback to students on their progress." (alpha=.796)

Level 2 Variables

Institutional Identity/Demographics

Carnegie Classification: From IPEDS, 2000 version of classification, Research/Doctoral, Masters, or Bachelors

Location: From IPEDS, Dummy coded indication of urbanicity: City, Suburb, Town, or Rural locale

Control: From IPEDS, 0=private, 1=public

Faculty Perceptions of Institution

Planned Approach to Student Success: A four item scale, where 1="Disagree Strongly" and 5="Agree Strongly," indicating the level of faculty agreement with the statements, "This institution has a comprehensive approach to helping first-year students succeed," "This institution has a coherent approach to helping first-year students succeed," "This institution has a clear curricular plan for students during their first year," and "First-year student success is a priority for this institution." (alpha=.861)

Socializing New Students: A four-item scale, where 1="Strongly Disagree" and 5="Strongly Agree," indicating the level of faculty agreement with the statement "My institution does a good job of"... 'Informing new students about the institution's history and traditions' and 'informing new students about the values this institution considers important,' 'facilitating new students' early involvement in the non-academic life of the institution,' 'conveying to new students the sense that they "belong" here.' (alpha=.764)

Faculty Awareness of Student Resources: A two-item scale, where 1="Strongly Disagree" and 5="Strongly Agree," indicating the level of faculty agreement with the statement "My institution does a good job of"... 'keeping faculty informed about the academic support services where they can refer new students who are having difficulties' and 'keeping faculty informed about the personal support services where they can refer new students who are having difficulties.' (alpha=.829)

Institutional Emphasis on Teaching: A two-item scale, where 1="Strongly Disagree" and 4="Strongly Agree," indicating the level of faculty agreement with the statement "At this institution, Teaching is more important than research," and "When hiring new faculty members, candidates' teaching abilities are more important than their research abilities." (alpha=.872)

Faculty Teaching Culture

Institutional means for each of the four faculty pedagogical practices included in the level-1 model, including *Active Teaching and Assessment*, *Learning through Application*, *Community Service*, and *Feedback to Students*.

Note. Items in italics indicate composite, multi-item scales. All level 1 variables are centered around the weighted institutional mean for that variable.

Table 3
Parameter Estimates

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Unconditional	Level 1 - Demographics	Level 1 - Complete	Level 2 - Institutional Identity	Level 2 Complete	Fully Interactive
Intercept	2.573 ***	2.580 ***	2.585 ***	2.766 ***	-0.817	-0.780
<i>LEVEL 1</i>						
Gender (Female)		0.292 ***	0.161 ***	0.166 ***	0.162 ***	0.162 ***
Race (White)		-0.018	-0.012	-0.010	-0.014	-0.187 *
Years at Institution		-0.006 **	-0.005 **	-0.005 **	-0.005 **	-0.024 ***
Learning Through Application			-0.251 ***	-0.257 ***	-0.258 ***	-0.260 ***
Community Service			0.242 ***	0.252 ***	0.252 ***	0.249 ***
Student Feedback			0.102 ***	0.104 ***	0.103 ***	0.100 ***
Active Teaching and Assessment			0.684 ***	0.683 ***	0.686 ***	0.683 ***
Race (White) x Learning Through Application			0.199 **	0.197 **	0.197 **	0.199 **
Race (White) x Student Feedback			-0.229 **	-0.228 **	-0.229 **	-0.234 **
<i>LEVEL 2</i>						
Masters Institution				-0.226	0.019	0.016
Research Institution				-0.117	0.352 **	0.400 **
Suburb Locale				0.047	0.018	0.022
Town Locale				-0.043	-0.197 **	-0.196 **
Rural Locale				-0.878 *	-0.523	-0.498
Public Control				-0.087	0.144	0.144
Institutional Emphasis on Teaching - School Mean					0.255 **	0.241 *
Active Teaching and Assessment - School Mean					0.990 ***	0.990 ***
<i>CROSS-LEVEL INTERACTIONS</i>						
Race (White) x Public						0.254 **
Institutional Emphasis on Teaching x Time at Institution						0.008 **
Sigma-square (residual level 1 variance)	0.785 ***	0.760 ***	0.553 ***	0.550 ***	0.551 ***	0.548 ***
Tau (residual level 2 variance)	0.058 **	0.057 **	0.057 **	0.048 **	0.013 *	0.013 *
Percent Variance Explained - Level 1		3.18%	29.55%	29.94%	29.81%	30.19%
Percent Variance Explained - Level 2				15.79%	77.19%	77.19%

Note. Reference groups: Bachelor's institution, Private control, City locale

* = p-value <.05

** = p-value <.01

*** = p-value <.001