Individual and Institutional Factors that Encourage Faculty to Promote Student Encounters with Difference in First-Year Courses

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The research presented herein draws from the Parsing the First-Year of College study (supported by the Spencer Foundation) and the Wabash National Study of Liberal Arts Education (supported by the Davis Educational Foundation and the Teagle Foundation). Special thanks are due to each of these foundations, as well as Charles Blaich and Ernest Pascarella. Of course, any errors in this manuscript remain those of the authors alone.
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Abstract

Research clearly indicates that faculty members have the potential to influence 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 particular pedagogical practice—requiring students to engage with difference.
Factors that Encourage Faculty to Promote Student Encounters with Difference in First-Year Courses

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) 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 pedagogical practice—promoting encounters with difference—in their first-year courses. The study identified 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 the personal and institutional characteristics that can influence faculty members’ use of effective
teaching practices. Although our data do not allow us to make an empirical link between faculty and student behaviors, the study assumes that certain pedagogical practices will increase the likelihood that students will engage with different people and ideas and, ultimately, learn through this engagement.

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 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). Our outcome variable represents a variety of faculty practices that are meant to “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
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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, Dey, Hurtado, & Gurin, 2002), and a host of other positive student outcomes (Hu & Kuh, 2003; Pascarella & Terenzini, 2005; Smith, Gerbick, Figueroa, Watkins, Levitan, Moore, 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 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, Chang, Hakuta, Kenny, Levin, & Milem (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. found that students exposed to divergent opinions during focus group 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, considered with other correlational research (Hu & Kuh, 2003), suggest that encounters with difference can improve cognitive activities. 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 effects 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.

Saenz, Ngai, and Hurtado (2007) found that the positive effects of diversity-related courses 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. 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 their 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. Women and faculty of color 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).

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 &
Encounters with Difference—can encourage faculty members' use of effective teaching practices (Spencer, White, Peterson, & Cameron, 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 that underlies our study. 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 four-year 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 effects literature or 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 (so 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, responses were received from 5,667 (44.2%) of them. The sub-sample used in this analysis includes the 2,853 faculty members who indicated they teach courses that serve primarily first-year students (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. Thus, findings from this study can be confidently generalized only to faculty at those institutions participating in the study.

Questionnaires gathered information on respondents' personal characteristics, pedagogical preferences, professional activities, and perceptions of their campus’s approach to the first year of college. Scales were developed using a series of principal components analyses
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(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 (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).” Faculty members also indicated how often they require first-year students to “examine ideas/perspectives other than their own.” Finally, faculty members 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 was .90.

**Predictor variables of primary interest.** Factorially-derived scales operationalized faculty behaviors and culture, and constitute the primary constructs we hypothesize are related to instructors’ encouragement of student encounters with difference. Because we were interested in how faculty members behave in response to specific environments, scale scores were used in two ways: as indicators of individual faculty member’s behavior and indicators of institutional environments. Four scales (*Learning through Application, Community Service, Feedback to Students, Active Teaching and Assessment*) represented the faculty member’s self-reported teaching activities in courses they taught for primarily first-year students. These four pedagogical scales were also aggregated within a specific institution to create campus-specific mean-scores. To represent the multiple dimensions of a campus's institutional environment and faculty culture, these mean pedagogical scores were complemented by four other campus-
specific aggregated scales (Planned Approach to Student Success, Socializing New Students, Faculty Awareness of Student Resources, Institutional Emphasis on Teaching) representing 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 its component items.

Along with these 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. We did not include faculty member’s rank for three reasons. First, rank is highly correlated with time spent at the institution. Second, 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. Finally, 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.

**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 & 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 stepwise approach 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.

Limitations and Delimitations

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
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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.

Similarly, it is commonly assumed that large introductory courses are often taught graduate assistants or adjunct instructors. We are unable to offer nationally comparative data about such courses to support these assumptions; although these assumptions make intuitive sense, particularly at large, doctoral-granting institutions. Our sample was limited to full- and part-time faculty members; graduate teaching assistants and adjunct instructors were excluded from our sample. Further, our institutional sample, from which our faculty sample was drawn, included primarily liberal arts and comprehensive universities. Only twelve of the forty-five participating institutions offered doctorates. Findings and implications offered in this article should be understood in light of these limitations.

Two sets of variables not included in this study may have considerable effects on faculty behavior. 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 faculties. 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. Although space does not allow us to present these findings, the results suggest that faculty behavior is influenced by one’s field/discipline. Nonetheless, this supplementary analysis 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. Although 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 mulitcollinearity may be influencing the
direction of the relationship. Certainly, further research is needed to fully understand the relationship between these two 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. To determine the proportion of variance explained at a given level, we divided the residual variance of that level with by the total variance.

Results of the unconditional model (Model 1) indicate the vast majority (93%) of the variance in the extent to which faculty members purposefully facilitated students' encounters with difference is attributable to individual differences among faculty members (see Table 3 for complete results). The remaining 6.9 percent of the total variance can be attributed to institutional differences. 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. The 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 teaching 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 teaching scales were again statistically significant predictors of the outcome. Two interactions remained statistically significant throughout this process—race \( \times \) \textit{Learning through Application} and race \( \times \) \textit{Student Feedback}. A positive relationship between the race by \textit{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 \textit{Promoting Encounters with Difference}, whereas the negative relationship between the race by \textit{Student Feedback} interaction and the outcome indicates that White faculty members who solicit student feedback are less likely to report \textit{Promoting Encounters with Difference}. 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.

\textit{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. Institutional size and selectivity were not statistically significant predictors of an institution’s average score on *Promoting Encounters with Difference*; 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. 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. No Level-2 interaction terms were significant. This model, with environmental and cultural variables, accounted for 77.2 percent of the total Level 2 variance—more than three times the amount of variance attributable to fixed institutional factors (institutional type, control, and urbanicity) alone.

*Cross-level interactions.* The final step in this multilevel analysis estimated a model that included those individual- and institutional-level predictor variables previously identified as statistically significantly related to *Promoting Encounters with Difference* 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 estimation (Model 6), 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 by public control and time at institution by 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. Model 6 reduced the individual-level variance by 30.2 percent. Recall that the Level 1 only model with no cross-level interactions (Model 5) 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 fully interactive model (Model 6) with the institution-level variance in the final Level 1-only model (Model 3) allows estimation of the extent to which our models explains between-institution variance. Model 6 accounted for approximately 77.2 percent of the original institution-level variance. In other words, nearly all of the institutional variability in Promoting Encounters with Difference 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 relative to Model 5.

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: *Promoting Encounters with Difference*. 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. In fact, even when the analysis was run separately for each field/discipline, individual faculty member 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 other 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 – were 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 et al., 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 faculty members’ 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. 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.

The conceptual framework used to guide our study places individual faculty member’s behaviors within two concentric contexts: a faculty culture and an institutional organization. Our
findings suggest that the power of a predictor appears to be related to its proximity to the faculty member within that framework. 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 the Active Teaching and Assessment scale. The most powerful predictors of faculty efforts to promote student encounters with difference 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.

Finally, it bears repeating that this study linked individual and institutional factors to a faculty member’s pedagogical behavior in first-year student classrooms. Our outcome measure indicates how often faculty members report encouraging students to interact across differences; we cannot make any claims about student behavior as a result of these pedagogical practices. Although previous research has suggested that instructional practices can influence students’ academic activities and subsequent learning (e.g., Umbach & Wawrzynski, 2005), additional research is required to confirm that students do, in fact, respond to faculty members’ specific pedagogical efforts to promote student encounters with difference.
References


Encounters with Difference


Table 1
Sample Description

<table>
<thead>
<tr>
<th></th>
<th>Unweighted Frequency / Mean</th>
<th>Weighted Frequency / Mean</th>
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<tbody>
<tr>
<td>Sex (Female = 1)</td>
<td>41.8%</td>
<td>40.7%</td>
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<tr>
<td>Race (White = 1)</td>
<td>81.5%</td>
<td>86.5%</td>
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<tr>
<td>Years at Institution</td>
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<td>16.58 (11.01)</td>
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<tr>
<td>Learning Through Application</td>
<td>2.85 (0.77)</td>
<td>2.89 (0.77)</td>
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<tr>
<td>Community Service</td>
<td>1.28 (0.55)</td>
<td>1.30 (0.56)</td>
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<tr>
<td>Student Feedback</td>
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<td>Active Teaching Assessment</td>
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<tr>
<td>Planned Approach</td>
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<tr>
<td>Socializing Students</td>
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<tr>
<td>Faculty Awareness of Student Resources</td>
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<td>3.60 (0.97)</td>
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<tr>
<td>Institutional Emphasis Teaching</td>
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<tr>
<td>Promoting Encounters with Difference</td>
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<td>2.58 (0.91)</td>
</tr>
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</table>

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 institution

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

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<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
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<th>Model 5</th>
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</table>

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

* = p-value <.05
** = p-value <.01
*** = p-value <.001