Infusing a Diversity Perspective into Human Development Courses

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Developmental contextualism, which emphasizes reciprocal relations between developing organisms and their environments, has stimulated greater attention to economic and cultural variations in development (Lerner, 1992). But has the rhetoric of this ecological orientation engendered vigorous research on the effects of socioeconomic status and cultural heritage? Surveys of psychological research suggest not (Graham, 1992). Equally important, how do educators address issues of diversity, given the limited knowledge base, and do such pedagogical efforts influence students' knowledge and attitudes? Simply put, we don't know (Gaff, 1992). In this report on our infusion of a diversity perspective into human development curricula, we address the pedagogical issues that are inextricably tied to research on economic and ethnic diversity.

First, what is meant by “diversity”? The concern with contexts of development, including family heritage, implies an interest in a range of variables such as race, ethnicity, physical handicaps, family structure, and cultural variations (Lerner, 1992). We will focus more narrowly, though, on socioeconomic status and ethnic and cultural differences. This focus is dictated by three considerations. First, income and ethnicity are confounded with each other (Johnson, Miranda, Sherman, & Weill, 1991) as well as with other pertinent variables such as family structure (Eggebeen & Lichter, 1991). Second, undergraduates experience difficulty in disentangling this confound, often failing to appreciate the higher incidence of Anglos but the overrepresentation of African Americans in poverty. Third, many agree that poverty is a stronger predictor of a child's future than all other factors combined (Lipsitt in Adler, 1991), yet most studies of poverty's effects on children and families confound income and ethnicity. Thus, attempts to instruct nascent professionals about human diversity must be especially attentive to poverty and ethnicity, taking care to examine how well conclusions about development generalize across these two variables.

Instructional issues in higher education have recently received intense public scrutiny, in no small measure due to debates...
about the multicultural curriculum (Gaff, 1992). More than half of all universities have added multicultural elements to selected departmental course offerings, particularly in the social sciences (Levine & Cureton, 1992). Reasons for doing so include changing demographics, fostering cultural pluralism, and inculcating critical thinking skills. Course content, however, reflects the state of current research. When primary sources fail to address contextual variations or extricate poverty from ethnicity, secondary sources will not do justice to the subtleties and richness of human development. In a review of 18 introductory sociology texts and six psychology texts, Dennick-Brecht (1991) found that the psychology texts typically discussed minorities only within the context of IQ tests. While sociology texts included content across several topics, the issues were limited primarily to prejudice and stereotyping and were typically discussed in a single chapter averaging only 5% of the total text. If textbooks reflect a discipline's prevailing paradigm (Kuhn, 1970), then students in the behavioral sciences could reasonably infer that multiculturalism is not valued as a topic of inquiry or pedagogy.

The teaching of knowledge is inextricably tied to the discovery of knowledge as a process. In 1990, the Carnegie Foundation for the Advancement of Teaching recommended that the teaching of knowledge join the discovery and application of knowledge as recognized scholarship. Perhaps it is time to include, within journals that report new findings, articles related to teaching young scholars about the process of discovery. Academic disciplines and their research journals determine what kind of scholarship is most valued, so if changes are to occur that are more than superficial, professional organizations and journal editors will play a key role in advocating for more careful consideration of contextual variations in development (Graham, 1992; Lerner, 1992).

There also is a social responsibility to address diversity issues at a time when ethnic intimidation (Bodinger-deUriarte, 1991) and naivete about poverty (Stacey, Singer, & Ritchie, 1989) are increasing on university campuses. Scholars do not function in isolation from contemporary society but serve as promoters of social change. They help emerging professionals critically examine research or policy proposals in light of new information or perspectives. Further, they are responsible for fostering the educational opportunities of those individuals who are historically alienated within educational settings. From entry into school, economic and ethnic status kindle expectations of academic failure and troubled peer relations that place students at risk for academic underachievement (Haskins, Walden, & Ramsey, 1983; Rist, 1970). The impact of being stigmatized and devalued can be observed in the alienation of minority students, so common at large Anglo universities (Loo & Rolison, 1986; Steele, 1992). Will faculty increase retention of underrepresented groups by being more attentive to diversity issues in their courses (see White & Sedlacek, 1987)?

Given the heterogeneity of the U.S. population, enhancing sensitivity to the needs and strengths of different economic or ethnic groups is an important responsibility of faculty in the social science area. The following describes a curriculum infusion project within a Human Development and Family Studies department in response to this mandate.

Study 1: The Limited Knowledge Base

A fundamental challenge confronting instructors who wish to adopt a multicultural perspective is the deficient research basis for teaching college students about diversity in human development. Prior content analyses of psychological journals, which found a dearth of normative information on low-income and ethnic minority children (Graham, 1992; McLoyd & Randolph, 1985), indicated that efforts to infuse diversity issues into human development courses were likely to be frustrating. Like Graham (1992), we were dismayed by the lack of research on diverse populations, a form of neglect that invites perpetuation of erroneous beliefs and oversimplification of complex issues, particularly the confounding of poverty and minority status. Accordingly, this first section documents shortcomings in the human development literature that present obstacles to effective multicultural instruction. In contrast to prior studies of this ilk, our content analysis encompasses more than the child development journals and focuses on poverty as well as various cultural and ethnic groups.

Method

We selected nine journals for analysis, three each from the content areas covered in the courses targeted for revision: child de-
development, adolescent development, and parenting or socialization (see Table 1). Although all nine are devoted to empirical reports, they vary widely in their emphasis on basic versus applied research and in their prestige as indicated by the Social Sciences Citation Index Impact Factor. The sample consisted of all empirical articles published by these journals from 1982 to 1991, with the exception of Child Development and Developmental Psychology, from which we randomly selected issues to yield a minimum of 70 articles per year. Reviews, commentaries, methodological and theoretical articles, case studies, and nonhuman studies were excluded.

The content analyses focused on two issues. First, we examined the description of the study sample to determine how often low-income and culturally diverse groups were included. If the number of diverse subjects was large enough to constitute a (potentially) separate group for analysis (n > 10), the study met our criterion for inclusion. This criterion, which is somewhat more liberal than Graham's (1992), included “heterogeneous” samples of 20 or more subjects but excluded “predominantly white, middle-class” groups. If the sample contained no information about socioeconomic status or ethnicity, it is listed in Table 1 as “Not Reported.” Second, the results section of each article was examined for evidence that the data had been analyzed by income level, ethnicity, and the interaction between the two. Included were studies that either described low-SES or multicultural groups, or that compared two or more groups. The interaction variable was counted if SES and ethnicity were entered as separate predictors in a multiple regression, if both were independent variables in an ANOVA, or if SES was examined descriptively within each ethnic group. Interrater reliabilities for four coders were computed on 14 journal issues (1,283 articles). Across all variables, agreement ranged from .76 to 1.00, with a mean of .93.

RESULTS

The 10-year averages for each journal, shown in Table 1, illustrate many of the obstacles one faces in teaching students about the effects of poverty and ethnicity on human development. First, information on family background was absent for a significant minority of studies, which is surprising given the emphasis placed on external validity in research methods courses. Second, less than a third of the studies included low-income or ethnically diverse subjects, and only half of the ones that did analyzed the data with regard to diversity. If the “Not Reported” category consists of middle-class Anglo samples, then it is likely that 80% of research on child development is not generalizable to diverse groups. This would be especially true of research on cognitive development (notably infant perception), childhood peer status, and normative adolescent development, all of which were overrepresented in the “Not Reported” category. Conversely, most research with diverse groups focused on cross-cultural differences in language or social development (cf. Graham, 1992), children at risk for or exhibiting developmental dysfunctions, or adolescent social problems.

A more detailed examination of the data revealed no discernible trend toward increasing sensitivity to diversity issues. Collapsing across journals, none of the repeated-measures ANOVAs that assessed changes in sampling or analysis were significant. These results confirm Graham's (1992) observation that developmental research on blacks declined to 1980 before leveling off, and they are consistent with surveys finding that multiculturalism is just now gaining a toehold in university curricula (Levine & Cureton, 1992).

Turning to differences by field in sampling and analyses, the data from each year were treated as independent observations. Admittedly, this ignores year-to-year consistencies in editorial policies but can be justified by the small stability coefficients (median r's < .24) and increased statistical power. ANOVAs, with Duncan Multiple Range post hoc tests, indicated that the adolescence journals were more likely than the child or family journals to include ethnically diverse samples, F(2, 87) = 15.96, p < .0001, and also were more likely to analyze the data for ethnic differences, F(2, 87) = 15.36, p < .0001. Differences also were observed on the SES-by-Ethnicity variable, F(2, 87) = 4.16, p = .02, with the family studies jour-

1 Given the small number of journals relative to the number of repeated-measures data points (10 years), power was increased by collapsing across journals. No consistent pattern was evident from visual inspection of each journal's data; sporadic upticks were most often due to special editions on diversity issues or social problems.
# TABLE 1

**Inclusion of Diverse Groups in Developmental Research, by Journal**

<table>
<thead>
<tr>
<th>JOURNAL</th>
<th>ARTICLES PER YEAR</th>
<th>% Sampled Diverse Groups</th>
<th>% Analyzed for Effects of Diversity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Not Reported Low-SES Ethnicity</td>
<td>Low-SES Ethnicity SES x Ethnicity</td>
</tr>
<tr>
<td>Child Development</td>
<td>86</td>
<td>33.22 19.35 19.00</td>
<td>8.97 8.51 2.10</td>
</tr>
<tr>
<td>Developmental Psychology</td>
<td>89</td>
<td>30.00 18.30 18.30</td>
<td>10.43 8.51 1.93</td>
</tr>
<tr>
<td>Merrill-Palmer Quarterly</td>
<td>20</td>
<td>26.53 23.98 18.88</td>
<td>14.80 10.71 2.55</td>
</tr>
<tr>
<td>Adolescence</td>
<td>64</td>
<td>43.89 22.41 32.60</td>
<td>12.54 22.10 2.19</td>
</tr>
<tr>
<td>Journal of Youth and Adolescence</td>
<td>34</td>
<td>29.62 25.81 30.20</td>
<td>17.01 18.18 2.93</td>
</tr>
<tr>
<td>Journal of Adolescent Research <em>(a)</em></td>
<td>22</td>
<td>27.27 20.00 36.36</td>
<td>12.27 24.09 4.09</td>
</tr>
<tr>
<td>Journal of Marriage and the Family ..</td>
<td>68</td>
<td>33.33 21.29 17.47</td>
<td>13.66 11.75 3.23</td>
</tr>
<tr>
<td>Family Relations</td>
<td>54</td>
<td>31.92 16.24 9.41</td>
<td>11.44 6.83 2.21</td>
</tr>
<tr>
<td>Journal of Family Issues</td>
<td>16</td>
<td>27.89 31.97 31.29</td>
<td>27.89 21.77 10.88</td>
</tr>
</tbody>
</table>

* The *Journal of Early Adolescence* was sampled until the *Journal of Adolescent Research* initiated publication in 1986.
nals being more likely to examine the separate effects of poverty and ethnicity. The latter result, however, is an artifact of the Journal of Family Issues’ frequent inclusion of income and ethnicity as covariates. When such “nuisance variance” studies were omitted, field differences on the interaction variable were no longer apparent.

Why are the adolescent journals so much more attentive to ethnic differences in development? It has been observed that research on minority youth reflects a deficit perspective that emphasizes the social problems “caused by” them (see McKenry, Everett, Ramseur, & Carter, 1989; Spencer & Dornbusch, 1990). We examined this preoccupation with minority deviant behavior through content analyses of five adolescent journals: 1988-1990 for the Journal of Adolescent Research, Journal of Early Adolescence, and Youth and Society; and the five volumes each of Adolescence and Journal of Youth and Adolescence with the highest proportion of articles on ethnic minorities. For the 628 studies, the sample composition was coded as before. In addition, the topic of research was coded as normative or deviant, with up to three subcategories being entered (see Table 2).

Hierarchical loglinear analysis was first used to examine the more general issue of overrepresentation of low-income minorities in studies of deviant behavior. Collapsing across study subtopics, the second-order effects for ethnicity, \( \chi^2(1) = 40.31, p < .00001 \), and income, \( \chi^2(1) = 9.81, p = .002 \), were both significant. The raw data, shown in Table 2, indicate that low-income youth were less likely to be included in studies of any type but especially those on normative development and that minority adolescents were much more likely to be sampled if the study focused on a social problem. Loglinear analysis was again employed to determine whether this pattern held across subtopics. For the analysis of the normative subtopics, only the ethnicity interaction effect was significant, \( \chi^2(8) = 20.24, p = .01 \). The 1 df interaction parameters indicated significant deviations from the expected distribution for “sexuality” (Z = 2.37) and “industry” (Z = 3.12), meaning that minority adolescents were overrepresented in research on sexual activity and contraception, and on employment issues. With regard to the deviant subtopics, both second-order effects for ethnicity, \( \chi^2(6) = 24.74, p = .0004 \), and income, \( \chi^2(6) = 33.00, p < .00001 \), were significant. Low-income minorities were overwhelm-

### TABLE 2

<table>
<thead>
<tr>
<th>Focus of Article</th>
<th>Non-Anglo</th>
<th>Low-SES</th>
<th>Neither</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Normative:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individuation; identity</td>
<td>31</td>
<td>13</td>
<td>90</td>
</tr>
<tr>
<td>Positive family relations</td>
<td>7</td>
<td>4</td>
<td>32</td>
</tr>
<tr>
<td>School achievement</td>
<td>11</td>
<td>9</td>
<td>33</td>
</tr>
<tr>
<td>Sexuality; puberty</td>
<td>20</td>
<td>11</td>
<td>25</td>
</tr>
<tr>
<td>Industry</td>
<td>12</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Intimacy; peer relations</td>
<td>6</td>
<td>2</td>
<td>33</td>
</tr>
<tr>
<td>Positive health (care)</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Egocentrism; appearance</td>
<td>1</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Adjustment</td>
<td>2</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td><strong>Deviant:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent conflict</td>
<td>5</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>School failure</td>
<td>11</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Pregnancy; prostitution</td>
<td>36</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>Teen parenting</td>
<td>17</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>Emotional disturbance</td>
<td>19</td>
<td>2</td>
<td>39</td>
</tr>
<tr>
<td>Delinquency</td>
<td>27</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Illicit substances</td>
<td>29</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Eating disorders</td>
<td>1</td>
<td>0</td>
<td>13</td>
</tr>
</tbody>
</table>

**Note.**—Based on 628 articles. Multiple entries were possible; miscellaneous topics were omitted.
ingly included in studies on pregnancy and teen parenting \((Z > 2.29)\) while most research on eating disorders focused on middle-class Anglos \((Z > -2.23)\).

**Discussion**

The most unexpected result of this content analysis is the minimal attention given to sample descriptions in many studies. Pedagogically, it seems paradoxical to stress to students the importance of external validity when essential information about samples is absent from so many published studies. Replication of research also is hampered by sample descriptions that omit ethnicity and social class. Such deficiencies may mirror a reluctance to address socially sensitive issues, with overtones of racism or victim blame (see Graham, 1992), although this hardly accounts for the many studies of adolescent social problems. Alternatively, if researchers assume that early neuromotor and later adolescent development are governed by maturation, then they might be less attentive to variations in ontogeny due to culture or family income. Yet research clearly demonstrates the susceptibility of maturational processes to environmental influences, particularly cultural factors and those related to poverty such as nutrition (e.g., Gottlieb, 1983; Millstein & Litt, 1990).

Like previous studies (Graham, 1992; McLoyd & Randolph, 1985), we found scant research attention devoted to diverse groups. The consequences of restricted sampling for general conclusions about human development provoke occasional overt scrutiny, as with the debate about racial differences in intelligence or the generalizability of the “bonding” phenomenon. Overreliance on Anglo, middle-class subjects may have more insidious effects, however. For instance, we found relatively few studies that examined the influence of social class and ethnicity on childhood peer relations, yet sociometric status (e.g., Dishion, 1990) and best-friend choices (Hallinan & Teixeira, 1987) differ by such family variables. The obvious result of this sampling bias is that conclusions about peer rejection and friendship patterns may not be generalizable. Equally troubling, though, may be missed opportunities to examine the developmental origins of prejudice (Phinney & Rotheram, 1987), the consequences of mainstreaming (Taylor, Asher, & Williams, 1987), or insights into the family dynamics that tend to produce rejected children. Such policy-relevant applications, as Lerner (1992) has noted, are more likely to be addressed with diverse samples.

There are negative effects on pedagogy as well. In our experience, it is difficult to present accurate, balanced descriptive information about ethnic or cultural variations in development if such information is limited or nonexistent. Students will not gain a full appreciation for the interplay of heredity and environment if most research is based on homogeneous rearing environments. Instructors also are at greater risk for perpetuating racist stereotypes if studies fail to disentangle social class and ethnicity (see Graham, 1992). The latter is particularly vexatious because the media more often attribute social problems to race rather than poverty (Edsall & Edsall, 1991), which has a potent impact on students’ attitudes, as will be documented in a later section.

The problems created by the confounding of social class and ethnicity are most evident in the adolescent literature. In a typical comparative study relying on samples of convenience, low-income minority youth are compared with advantaged Anglo teens. Differences between the two groups are then attributed to minorities’ deficiencies (see McKenry et al., 1989), a generalization that fails to acknowledge historical differences in cultural heritage, the heterogeneity within ethnic groups, and most critically, the influence of family income. The confounding of race and social class exaggerates group differences because minorities are overrepresented in the lower social strata (Spencer & Dornbusch, 1990) and are more likely to be drawn from clinical groups or captive inner-city sites that differ markedly from the more typical environments of adolescents (McKenry et al., 1989).

Inappropriate comparative studies have been sharply criticized because they perpetuate ethnic stereotypes and reinforce perceptions of minorities as deviant (Azibo, 1988; McKenry et al., 1989). This deficit perspective is evident in the postulates of many studies of adolescent development. For example, Klinge and Piggott (1986) predicted that African Americans would be more likely to use illegal substances, but, quite the contrary, Anglos admitted to significantly more drug use. Farnworth (1984) has argued cogently that the confounding of race, poverty, and family structure may lead to spurious conclusions about the effects of a “broken home” on delinquency rates. In fact, being reared in a female-headed African American
household may be less of a risk factor for juvenile crime than income and the availability of extended support networks. Likewise, Meyer (1991) found that adolescent pregnancy prevention is depicted as a female low-income, minority problem, which absolves males of any responsibility for their own fertility and ignores the higher incidence of Anglo adolescent childbearing. Thus, our analysis of recent research on adolescence confirms the prevailing but simplistic assumption that minority status places youth at risk for deviant development.

What can be done to redress these biases in the literature? First, a number of critics advocate for greater use of within-group studies, which circumvent the deficit perspective inherent to the race-comparative approach (Farnworth, 1984; McKenry et al., 1989). Second, it is imperative that studies control for income level and family structure, especially when investigating the origins of social problems. A good example of both approaches is Luster and Dubow's (1990) study of the home environment provided by adolescent mothers. African American, Hispanic, and Anglo mothers were studied as separate groups. Within each, the authors examined the separate contributions of social class, family structure, and social supports, among other variables, to the quality of the home environment. Similarly, Heaton (1991) found ethnic differences in rates of marital dissolution, but, just as important, within-group heterogeneity was explained by the timing of life events even after controlling for social class. Both studies illustrate the need to disentangle poverty and ethnicity, and the importance of explaining within-group heterogeneity that might be due to developmental processes unique to each ethnic group. Finally, our data indicate minimal interest in studying minority or low-income adolescents' normal development. This is problematic both because theoretical propositions will not be tested for their generality, and resilience to stress and adaptation during a marked developmental transition will be ignored.

However, these flaws in the empirical literature provide unique opportunities for teaching. What better way to illustrate the importance of external validity than to have students critique studies on a given topic that differ in sample composition, if they are described at all? Students also can be taught critical thinking skills by having them evaluate inferences drawn from studies that confounded income and race or that imply that minority adolescents are deficient. Given the limited knowledge base as both an obstacle and an opportunity, the next section describes one academic department's approach to infusing diversity into the curriculum.

Study 2: The Multicultural Curriculum Infusion Project

Faculty volunteers from eight departments in the College of Applied Human Sciences participated in a year-long project to infuse multicultural content into their courses. The purpose was to promote cultural pluralism and social equality by using instructional materials that are appropriate for diverse students and that are integrated rather than supplementary. Faculty workshops were especially helpful in understanding variations within ethnic groups (e.g., Duany & Pittman, 1990), the current extent of prejudice in America (e.g., Dovidio & Gaertner, 1986; Takaki, 1987), issues related to ethnic identity, and innovative instructional methods. Specific approaches for increasing cultural awareness (e.g., Lynch & Hanson, 1992) and communication (e.g., Asante & Gudykunst, 1989) also were modeled. In these ways, the faculty explored shared meanings for multicultural concepts and learned effective instructional approaches to which they had limited exposure in their own education.

Each faculty participant in the project infused a multicultural perspective throughout at least one course. The present evaluation focuses on four human development courses taught by the three authors; these were sequenced, from sophomore to senior level, in terms of increasing emphasis on synthesis of research-based knowledge, theory, and application to social policy issues. Two targeted courses were standard surveys of child and of adolescent development, whereas the other two delved more deeply into childhood socialization, especially extrafamilial contexts, and theory and practices related to parenting. The significance of modifying a sequence of courses cannot be understated. First, it conveys to students that sensitivity to and knowledge about diverse groups are essential rather than ancillary to their understanding of human behavior and their professional skills, especially for students who will work intimately with low-income or minority families in human service or teaching careers. Second, repeated exposure to the effects of poverty or cultural variations in development across
the life span reinforces lessons learned that might not otherwise be consolidated in an isolated course. Finally, if minority students see that they are no longer marginalized or devalued in the research literature and educational forums, they may feel less stigmatized (Steele, 1992) and may develop a greater identification with the profession.

Each instructor targeted key aspects of diversity that were infused into the course content. “Infancy and Childhood” delved into cross-cultural variations in maturationally based behaviors, prosocial development, and cognitive skills. Students in “Adolescence” critically examined the literature on SES and ethnic differences across developmental domains, with particular attention being devoted to the deficit perspective. “Childhood Socialization” highlighted cultural differences in socialization and educational experiences, whereas “Parenting” placed relatively more emphasis on ethnic differences in child-rearing practices; both courses discussed the effects of social class, family structure, and sex roles on socialization practices. All four courses emphasized the effect of poverty on cognitive and social development, health, and family functioning. Thus, within a given course, students were repeatedly exposed to the effects of important status variables on development; across a sequence of courses, they were exposed to diversity issues in manifest forms, and they also examined the effects of poverty on multiple developmental processes and age groups.

The targeted courses also adopted pedagogical techniques that promote critical thinking (see Brookfield, 1987; Kurfiss, 1988) and are effective with various learning styles (Dunn, Beaudry, & Klavas, 1989), which may differ across cultural groups (Kolodny, 1991). One such technique is cooperative learning, which involves peer tutoring and interdependence in solving problems (Kagan, 1990). For example, students in “Infancy and Childhood” were assigned at random to one of 15 cultural groups and were given a description of that culture’s demographics, livelihood, family composition, women’s roles, and prevailing values and beliefs. They were to apply LeVine’s (1988) theory of cultural influences on child-rearing practices to their assigned culture, decide how their group would rear children, and verify inferences with library resources. Information was shared in a poster session, which grouped cultures by greatest contrast on several salient dimensions (e.g., independence vs. interdependence; communal, extended, or nuclear family structure). Another approach was deconstruction of (a) the primary research literature, as a way to critically examine samples and inferences from data or (b) children’s literature from different cultures and eras, as a means of assessing the values and expectations symbolized in books.

Simulations are another means of applying descriptive and theoretical knowledge to various groups and to social problems, and in the process inculcating divergent thinking, synthesis, and hypothetico-deductive logic (Brookfield, 1987). As an example, “Parenting” students were assigned two case studies: a low-income, Anglo single mother of two children and an African American dual-income family with two children. Small groups identified the families’ basic needs, researched the costs of those needs, discussed sacrifices that would have to be made to make ends meet, offered explanations for upward or downward mobility, and discussed implications for intervention programs and policy options that support low-income families. Thus, the groups were responsible for defining the problem’s parameters and the accuracy of possible solutions. Finally, cognitive dissonance can be used to confront and change incompatible beliefs, such as prejudicial attitudes (see Constans, 1983). For instance, students must select one assertion from each of five pairs of incompatible statements about welfare (e.g., “More than half the people on welfare are able-bodied men”) and then convince someone else in their group that the given assertions are false.

Little evidence exists that multicultural curricula influence college students’ attitudes and knowledge (Gaff, 1992). Thus, after significant revisions took place in all facets of our targeted courses, we used various strategies to evaluate the impact of our curricular revisions on students’ (a) sensitivity to and tolerance for diverse groups, (b) knowledge about cultural and income variations in child development and family functioning, and (c) emotional reactions to volatile issues related to race and prejudice. Research does indicate that the cumulative effect of a liberal arts curriculum is to increase tolerance for outgroups (Guimond, Begin, & Palmer, 1989). By extension, we expected that students in our modified courses would hold less prejudicial attitudes toward the poor and minorities, beyond what is observed in the usual human devel-
development curriculum, and that they would be more knowledgeable about the confounding of poverty and ethnicity.

**METHOD**

**Sample**

Content analyses related to changes in knowledge and affective reactions focused on “Infancy and Childhood” in the fall of 1991 (n = 69) and “Adolescence” in the spring of 1992. With regard to attitude changes, two targeted courses were studied on consecutive semesters, “Adolescence” (n’s = 96 and 95 in spring and fall of 1992, respectively) and “Childhood Socialization” (n’s = 67 and 78). Preliminary analyses revealed no effects of time of measure for either course, so these data were collapsed across semesters. “Parenting” was included in the fall only (n = 68). Of the 241 students in the fall classes, 37 were concurrently enrolled in two of the targeted courses. The three comparison groups were 367 behavioral sciences students enrolled in marriage and family and child psychology courses; 291 natural sciences students enrolled in ecology and developmental biology; and 277 business students enrolled in business communications, accounting, and marketing. Each comparison group included at least one sophomore level and one junior level course. Overall, 1,271 students completed the attitude pretest and 996 completed the posttest, with 959 completing on both occasions. After omitting students who dropped the course, 85% of the original sample was retested. Analysis of the demographic variables and pretest scores revealed no selective attrition.

The four groups were similar with respect to ethnic composition (90% of the sample was Anglo; the remaining students were Hispanic, n = 53; Native American, n = 24; African American, n = 13; or Asian American, n = 25), age (21.9 years), mix of majors and nonmajors (74 different majors were represented; 35%-58% of the 200-level courses and 56%-70% of the 300-level courses were majors), and the instructors’ experience teaching college students. The behavioral sciences controls, however, had a higher percentage of freshmen and sophomores, $\chi^2(9) = 316.6, p < .00001$. Students in the multicultural curriculum group, consisting of 300-level courses, also had taken significantly more courses in the social and behavioral sciences ($M = 14.3$) than had students in the three comparison groups (range of 3.9 to 6.9), $F_{\text{group}}(3, 1,264) = 197.95, p < .00001$, $F_{\text{level x group}}(2, 1,264) = 4.08, p = .02$.

**Attitude Measures**

The attitude survey contained 35 Likert-type items, with response options ranging from 1 (strongly disagree) to 5 (strongly agree). Equal numbers of items (14) assessed attitudes toward minority groups and toward poverty. The remaining seven items were fillers that measured conservative versus liberal attitudes toward political issues such as school prayer and sex education in the schools (Cronbach’s alpha = .57; 14-week stability = .76). Prior research indicates a consistent relation of Protestant Ethic conservatism with Modern Racism (McConahay, 1986) and blaming the poor for their plight (MacDonald, 1972). Items from each domain were interspersed throughout the questionnaire.

**Racial attitudes.**—Two scales have been developed by McConahay (1986) to assess racial attitudes. These items are similar to those which have been used, since 1942, by the National Opinion Research Center to track changes in racial attitudes (see Schuman, Steeh, & Bobo, 1985). The seven Old-Fashioned Racism items assess attitudes that are more easily identifiable as prejudicial; for example, “Black people are generally not as smart as whites.” The Modern Racism Scale, in contrast, assesses symbolic forms of prejudice (see Brewer & Kramer, 1985) related to making unfair and excessive demands for equal opportunity; for example, “Blacks are getting too demanding in their push for equal rights.” The two scales exhibit high test-retest (.72—.93) and alpha (.74-.86) reliabilities. The alpha reliability for Old-fashioned Racism was lower in our sample (.59) but was comparable for Modern Racism (.80). Stabilities over the 14-week semester were .63 and .69, respectively. College students readily identify the Old-fashioned but not the Modern Racism items as measures of prejudice, leading the author to argue that the latter is a relatively nonreactive measure of racial attitudes. Regarding construct validity, scores on the Modern Racism scale predict the likelihood of hiring an equally qualified minority candidate for a job, voting for an African American political candidate, anti-busing attitudes, and negative feelings toward African Americans (see McConahay, 1986).

**Attitudes toward poverty.**—Guimond et al. (1989) identified two independent item
clusters related to attributions for the causes of poverty: Person Blame and System Blame. We did use their five-item measure of system-blame ideology, which includes items such as, “The economic situation in the United States is unfair to low-income families.” Even though the scale is sensitive to university education in the social sciences and to unemployment status, the low alpha reliability (.58) was a concern. With the addition of several new items, the alpha in our sample increased to .68 (14-week stability = .64). MacDonald's (1972) Poverty Scale was used to measure person-blame ideology. Seven of the 12 items on this scale were included, in order to counterbalance the racial attitude and filler items. Prior research indicates that the Poverty Scale is highly related to a measure of the Protestant Ethic (MacDonald, 1972) and more generally to belief in a just world (Wagstaff, 1983). Research with the Poverty Scale indicates that it has high test-retest (r = .90) and alpha (r’s > .77) reliabilities; the alpha coefficient for our sample was .81, and the stability coefficient was .71.

Content Analyses of Student Learning

Knowledge gains were somewhat difficult to document, for several reasons. First, there are no standardized instruments that measure comprehension of multicultural issues related to human development. Second, traditional multiple choice exam questions are probably not a valid index of how well students have mastered complex concepts and applied them to difficult issues. Third, individualized outcomes were expected, within a targeted class (reflecting student diversity) and across the curricular sequence (reflecting different course content and diversity themes). For these reasons, qualitative evaluation is the method of choice (Patton, 1987). To illustrate a qualitative approach to assessing student learning, we conducted content analyses of two course assignments, described earlier under cooperative learning and simulations, and documented carry-over effects from prerequisite to subsequent courses. One assignment was the “Infancy and Childhood” cooperative learning exercise on cultural differences in socialization, the purpose of which was to increase students’ understanding of cultural variations in family ecologies and child rearing, and to apply LeVine’s (1988) theory of human parental care. The “Parenting” assignment required students to discuss the implications of poverty for meeting a family’s basic needs, child-rearing practices, and intervention and policy considerations.

Process Evaluations

All faculty participants in the diversity project expressed concern about whether addressing multicultural issues in class would fuel the strong emotions surrounding racial prejudice. In particular, faculty wished to avoid offending minority students by spotlighting them or making well-intentioned but uninformed comments or by providing a forum that might elicit insensitive remarks from Anglo students. Many also worried about diluting course rigor by including material that might be seen as superfluous to discipline-specific content. We assessed students’ affective responses through written reactions to assignments and class debriefings. Concerns about course rigor were evaluated with our university’s course evaluation form, on which students judge specific features and the overall quality of courses on a scale from 1 (strongly disagree) to 5 (strongly agree). We focused on a subset of items that tapped concerns others have expressed about multicultural education, especially intellectual challenge, creating a climate for discussion, and interest in the material.

Results

Attitudes toward Outgroups

Pretest attitudes were interrelated in the expected fashion (all p < .0001): Students who were more conservative were more likely to blame poor people for their plight (r = .35) and not the system (r = -.34), and were more prejudiced as assessed on both the Old-Fashioned Racism (r = .41) and Modern Racism (r = .42) scales. The two measures of attitudes toward the poor were inversely correlated (r = -.48) while the two measures of racial prejudice were correlated .68, consistent with McConahay (1986). Finally, those who blamed the poor were also more likely to be racially prejudiced (r’s = .47 and .54 on the Old-Fashioned and Modern Racism scales, respectively), while the reverse was true for System Blame (r’s = .43 and .50). Similar if not higher correlations were found at the posttest.

Initial differences.—A group x level of course MANOVA revealed no effect of level, nor its interaction with group, on the five pretest measures. The group effect, however, was highly significant, Wilk’s lambda = .92; F = 9.21, p < .00001. Univariate F
tests revealed significant differences ($p < .0001$) on all scales. In every case, the natural sciences and business controls were more conservative and prejudicial than the other two groups, although with the means generally falling below the scale midpoint, prejudice is relative. We then collapsed across level and reanalyzed the data with the number of social and behavioral sciences classes as a covariate. The regression effect was significant for System Blame, $F(1, 1.258) = 5.65, p = .02$, and Modern Racism, $F(1, 1.258) = 11.61, p = .001$. Even after co varying for such classes, however, initial group differences remained on all five scales, $F(3, 1.258) = 5.35-17.34, p < .001$.

Although the above results indicate that those who have had more classes in the social sciences are more open-minded, cohort effects or self-selection factors affecting choice of major may also account for differences in attitudes. We attempted to replicate Guimond et al. (1989) by examining the effects of year in school and field of study (behavioral sciences, natural sciences, business). As expected, the effect of field of study was significant across all scales, univariate $F > 8.76, p < .0001$. The main effects of field on Person Blame, $F(2, 1.222) = 23.03, p < .0001$, and Modern Racism, $F(2, 1.222) = 31.76, p < .0001$, were qualified by year x field interactions, $F(6, 1.222) = 2.26, p = .035, F = 4.33, p < .0001$, respectively; these interactions are depicted in Figure 1. With respect to Person Blame, Scheffé post hoc analyses indicated that the behavioral sciences students differed significantly ($p < .05$) from the natural sciences students in the freshman year and from both comparison groups in the sophomore and senior years. The difference between the behavioral sciences and business students, on both Person Blame and Modern Racism, is a full standard deviation by the senior year. Thus, students appear to select majors that are somewhat consistent with their values, and these initial differences may be amplified by the type of courses they take.

**Effects of the infusion curriculum.**— Data from the five attitude scales for the 959 students completing both pre- and posttests were entered into a repeated-measures MANOVA, with the number of behavioral and social science courses as a covariate. As with the pretest data, significant group effects were found on each measure, $F(3, 955) > 8.50, p < .0001$. As well, a significant time effect was observed on each scale, $F(1, 955) > 8.38, p < .004$, except a trend ($p = .077$) for blaming the victim for poverty to decline (see Table 3). These main effects were qualified, on each attitude scale except conservatism, by group x time interactions: Person Blame, $F(3, 955) = 5.30, p = .001$, System Blame, $F(3, 955) = 5.44, p = .001$, Old-fashioned Racism, $F(3, 955) = 5.69, p = .001$, and Modern Racism, $F(3, 955) = 5.08, p = .002$. Planned contrasts indicated that students in the revised courses decreased more than any other group, including the behavioral sciences controls, on Person Blame and Old-fashioned Racism, and increased in System Blame (all $p < .004$). The interaction effect on Modern Racism was due to a decrease in each group, especially natural sciences students, in contrast to no change in business students’ attitudes. None of the contrasts comparing the behavioral science

![Diagram](image_url)  
**Fig. 1.**—Differences in attitudes toward the poor and minorities, by field of study
<table>
<thead>
<tr>
<th>Attitudes</th>
<th>Diversity (n = 302)</th>
<th>Behavioral Science Controls (n = 225)</th>
<th>Natural Science Controls (n = 218)</th>
<th>Business Controls (n = 214)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>Conservatism</td>
<td>1.82 (.58)</td>
<td>1.74 (.56)</td>
<td>1.88 (.67)</td>
<td>1.81 (.57)</td>
</tr>
<tr>
<td>Poverty:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person blame</td>
<td>2.50 (.73)</td>
<td>2.34 (.74)</td>
<td>2.71 (.79)</td>
<td>2.69 (.75)</td>
</tr>
<tr>
<td>System blame</td>
<td>3.70 (.60)</td>
<td>3.88 (.57)</td>
<td>3.60 (.59)</td>
<td>3.69 (.58)</td>
</tr>
<tr>
<td>Racism:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old-fashioned</td>
<td>1.86 (.46)</td>
<td>1.73 (.44)</td>
<td>2.00 (.52)</td>
<td>1.93 (.53)</td>
</tr>
<tr>
<td>Modern</td>
<td>1.75 (.57)</td>
<td>1.63 (.55)</td>
<td>1.93 (.60)</td>
<td>1.83 (.59)</td>
</tr>
</tbody>
</table>

TABLE 3
Mean (SD) Differences in Conservatism and Attitudes toward Poverty and Race, by Instructional Group
controls to the natural sciences and business controls were significant, which indicates that changes in attitude toward outgroups are not simply attributable to course content on human behavior and development.

Next, we tried to tease out variables related to attitude shifts in the targeted classes. First, planned contrasts were structured according to course emphasis. The largest decreases in Person Blame were expected and observed, \( t(953) = 3.36, p = .001 \), in “Adolescence” and “Parenting,” because they devoted substantial attention to the effects of poverty on individuals. System Blame was expected to increase in “Adolescence” and “Childhood Socialization” because of their consistent emphasis on contextual influences and social policy issues; again, this hypothesis was supported, \( t(953) = 2.42, p = .01 \). None of the contrasts on the racism scales were significant, perhaps because all three courses infused material on ethnicity.

Class discussions of multicultural issues led us to expect that conservative students would show different patterns of attitude change, especially given the societal events that occurred at the end of each semester—the Los Angeles riots in April 1992 and passage of Colorado's anti-homosexual amendment in November 1992. However, none of the interaction effects, involving the trichotomized conservatism variable with group and time, were significant. As well, there was no measurable relation between the number of prior diversity courses taken and pretest attitudes in the fall courses. Finally, students who were enrolled concurrently in at least two of the infused courses were expected to show large changes in attitude, yet none of the F tests were significant.

**Student Learning**

Content analyses of the “Infancy and Childhood” assignment on cultural differences in socialization revealed that all groups applied LeVine’s theory to their culture, noting for instance the relation between infant mortality and parental investment, or agrarian versus industrial livelihood and emphasis on education. Most of the groups (75%) also correctly described the relation between family structure and sources of support and prosocial development. Open-ended comments indicated that students were less ethnocentric: 78% said that they had a greater appreciation for the large diversity across cultural and ethnic groups, and 48% better understood how diversity affects families and child rearing. The following comments illustrate how this exercise helped students to confront their ethnocentrism:

> This exercise opened my eyes to a broader range in human development. It’s easy in all of the human development classes to generalize ideas to our society only. Exercises like this help us to see things from another point of view.

> Unique cultural values and ecological factors can have a profound effect on how one would raise and socialize his/her children.... We must realize and understand that there are alternative ways of raising our children when the environmental conditions may not seem universally ideal. Therefore, we should not be egocentric about our own cultural values and ways for rearing our children.

On the “Parenting” assignment related to poverty and child rearing, students were generally accurate in estimating the costs of basic needs, relative to ranges from official sources such as FDA food cost estimates or HUD housing estimates. Most of the sacrifices the students proposed for the low-income family were similar to those discussed in Schorr’s (1989) policy book, such as living in crowded, inferior housing (77%), having inadequate or no health care (43%), being dependent upon inferior day care (45%), and suffering from an inadequate diet (49%). The proposed intervention programs were striking for two reasons. First, even though the question was about parenting programs, a majority of students emphasized economic and survival issues more than child rearing, consistent with Schorr’s assertion that parent education is essentially irrelevant for low-income families. Second, reflecting our infusion project’s efforts to disentangle poverty and ethnicity, most students believed that there were fewer barriers to program access due to the middle-class family’s ethnic minority status than to the Anglo family’s poverty. The confluence of insight and empathy gained from this assignment is illustrated in one student’s comment: “It is no longer a mystery to me that families in this situation are constantly having their utilities shut off, their children go to school hungry, and they are unable to pay for health care. For example, dire living conditions combined with not enough money to eat results in poor health care. Without money to attend to health needs, these families just keep getting more sick. It seems like a never-ending cycle.”

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2 A more complete analysis of this assignment is available from the first author.
A more stringent test of students' mastery of course material is whether they are able to apply their knowledge in subsequent classes. For instance, the first assignment in “Adolescence” required students to evaluate a report from the William T. Grant Foundation, in which risk to adolescents' well-being could be assigned to race or poverty. Students who took the revised “Infancy and Childhood” course, which explicitly addressed the confounding of income and ethnicity, were more likely than students from other child development courses to correctly identify poverty as the principal risk (81.5% vs. 43.9%, \( z = 2.81, p < .005 \)). At the beginning of the following semester, students in “Childhood Socialization” were asked to describe the most important factors contributing to their current place in society and to identify the gravest threats to healthy productive life for a child born in 1992. Students who had taken at least one of the revised prerequisites were more likely to attribute their success to their family's social class (35% vs. 7%; \( z = 2.12, p < .03 \)), whereas students who had taken neither infusion course credited it to individual drive and determination (54% vs. 21%; \( z = 2.03, p < .05 \)). As well, students from the infusion classes were more likely to identify poverty as a major threat to children's future well-being (70% vs. 29%; \( z = 2.64, p < .01 \)); in contrast, students who had taken neither infusion course more often said that poverty and malnutrition were problems in other parts of the world but not the United States (32% to 4%; \( z = 2.13, p < .03 \)). Thus, it appears that the curricular revisions succeeded in increasing students' understanding of the long-term risk associated with poverty.

**Process Evaluations**

Debriefings following class discussions of volatile diversity issues should allay fears that these topics cannot be addressed without offending or alienating students. Most participants, including 10 ethnic minorities, in an “Infancy and Childhood” discussion of race, income, and IQ scores, were glad the issue was confronted (33%) or said that they had gained new insights (49%). Fifteen percent felt neutral (i.e., it was old information), while a total of 47% were angry or frustrated at the current state of affairs (e.g., discrimination, blaming the victim, lack of social progress). Only 13% expressed discomfort with discussing race and IQ—one of them a minority student—yet all of them acknowledged that it was too important an issue to ignore. One Anglo student's comment encapsulates both the need for addressing multicultural issues and the mixed emotions it provokes: “I enjoyed this exercise. The statistics and the new sense of reasoning were very helpful to me. I grew up in a small town and I never had even one minority as my classmate, or even peer in the entire school system. It made me uncomfortable in class when we talked about blacks and minorities while they were sitting there with us. Coming from this strictly white rural community and comparing my knowledge now to what I lived through in high school is very interesting.”

In general, course rigor was not diluted by attention to diversity issues, nor did student enjoyment of the course decline as would be expected if such sensitive issues left any residue of negative affect. Compared to a baseline average of the three to five semesters preceding infusion of diversity content in “Infancy and Childhood” and “Adolescence,” no changes were evident on the following items: This course is an intellectual challenge, the instructor has excellent knowledge of the subject, and the instructor creates a climate for discussion. Student interest in the subject material increased significantly in “Adolescence,” \( M = 4.74 \) versus \( M = 4.08, \( z(203) = 5.88, p < .001 \), but remained stable in “Infancy and Childhood,” \( M = 4.24 \) versus 4.38 prerevision. Students in “Infancy and Childhood” were less likely to perceive the course as beneficial, \( M = 4.22 \) versus \( M = 4.62 \) prerevision, \( z(490) = -3.64, p < .001 \), although no changes on this item were observed in “Adolescence,” \( M = 4.67 \) versus \( M = 4.63 \) prerevision. Students in “Adolescence,” who often applied information in simulated professional roles, believed themselves to possess more professional skills after the course revisions, \( M = 4.72 \) versus 4.37, \( z(203) = 3.44, p < .001 \); perhaps majority students will be more receptive to multiculturalism if its relevance to their lives is made evident.

**Discussion**

These results provide strong evidence that infusion of content on multicultural diversity has a broad effect on students' attitudes toward outgroups. These shifts were particularly evident in attitudes toward the poor, which was a consistent theme across all targeted courses. Inclusion of a behavioral sciences comparison group tends to rule out more general course content as an explanation for these attitudinal changes. It is noteworthy that the small but significant
declines in racism occurred against the backdrop of a general increase in racial tensions and hate crimes on campuses (Farrell & Jones, 1988). Although curricular changes may explain these attitude shifts, historical events also may have played some role. The spring posttests were administered at the height of the April 1992 Los Angeles riot, which was viewed by many in the media as a racial conflict, and the fall posttests were given shortly after Colorado voters sanctioned discrimination against homosexuals.

Our evidence suggests that general attitudinal shifts may occur through the accretion of small changes in attitudes toward specific groups or issues. For instance, students in the “Adolescence” class exhibited large changes on Person Blame, which was a content area targeted by the instructor. Recall that many of these students had completed the second of a sequence of courses emphasizing the need to distinguish between race and poverty. Thus, exposure to different aspects of diversity across a sequence of courses may have a cumulative effect. Such a process would account for the relation between the number of social science courses and tolerant student attitudes, and the widening gulf in attitudes between behavioral science and business students over 4 years of college. Assuming that universities value sensitivity to and tolerance for diverse people and wish to inculcate this in students (Gaff, 1992), our findings argue for greater infusion of multicultural diversity into courses outside of the liberal arts and social sciences, and for a careful sequencing of a core set of courses that would be required of all undergraduates.

Although it is somewhat more difficult to draw firm conclusions from the qualitative analyses of student learning, three patterns do stand out. First, students mastered a number of critical thinking skills, including the application of theory to diversity issues, drawing inferences from case studies or patterns of data, and critically evaluating evidence and assumptions, especially related to the confounding of poverty and ethnicity. Such benefits are likely due to the pedagogical methods advocated for multicultural instruction. Second, student comments in each targeted course indicated that ethnocentrism declined, especially when the context for ethnic or cultural differences was discussed or when cooperative learning exercises were used. Third, consistent carry-over effects were observed in the ability to distinguish poverty from ethnicity as developmental risk factors. These results, although tentative, are significant to the extent that they assay students’ preparation for entry into their profession and suggest means for faculty to evaluate teaching effectiveness.

Summary and Conclusions

Research universities lead other 4-year institutions in efforts to increase the multicultural content of their curricula (Levine & Cureton, 1992). The success of these efforts will depend, among other factors, upon the strength and generalizability of research in the social sciences. Yet our content analysis of developmental journals demonstrates a general insensitivity in research samples to the influence of poverty or ethnicity on development and, worse, the perpetuation of a deficit perspective on minority adolescence. This lack of generalizability severely hampers our understanding of human development as well as our social policy efforts. It does, however, provide an opportunity for teaching critical thinking skills to students as they evaluate inferences drawn from studies that ignore or confound social class and ethnicity.

Despite the limitations in our research base, sufficient information exists to infuse diversity content into human development courses. Doing so has a number of benefits, including reductions in prejudicial and blaming attitudes toward minority groups, increased knowledge of variations in human development, and inculcation of critical thinking skills. Importantly, these effects can be attributed to the infusion of diversity throughout a single course, as opposed to mere exposure to developmental information in a typical course, and across a sequence of courses. Such results suggest that a freestanding “diversity day” or a single multicultural course will be less effective at enhancing multicultural sensitivity.

Faculty are increasingly obligated—by scientific considerations, by societal demographics, by professional societies, and by moral suasion—to address more adequately diversity issues in research and teaching. However, only a small percentage of them actually heed the call (Wilkerson, 1992). Adler (1991) notes that the reluctance to don this mantle of responsibility may be due to a reticence to describe ethnic and class distinctions in narratives, assumptions about developmental universals, methods of convenience sampling that are widely used and uncritically accepted, and underfunding of
studies on normative development in minority groups. The field of human development should lead the way in modifying its scholarship—of discovery and of teaching—to reflect the diversity of cultural, social, and economic contexts for development.

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