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The Campus Diversity Questionnaire-Revised (CDQ-R) is a multicultural diversity climate assessment tool containing 23 Likert-type scale agreement-disagreement statements and four demographic questions (age, year in school, gender, and race). The CDQ-R was administered at 11 universities in the United States, and a total of 2,383 students participated. Significant institutional differences emerged as well as individual differences involving age, year in school, gender, and race. These results are helpful in understanding the different constituent needs of students on the college campus.

Assessment of Cultural Diversity at Metropolitan Universities

What is the importance of cultural diversity on today's university campus? The simplicity of this question belies the complexity of the answer. What role does cultural diversity play in the overall quality of the undergraduate educational experience? Does a diverse environment enhance it? The *Chronicle of Higher Education* recently published a commentary entitled, "On the Importance of Diversity in Higher Education," that was endorsed by 67 learned societies (1999). Why are diversity issues on college campuses important to our society? One answer comes from the same *Chronicle* article: "[...] the diversity we seek, and the future of the nation, do require that colleges and universities continue to be able to reach out and make a conscious effort to build healthy and diverse learning environments that are appropriate for their missions. The success of higher education and the strength of our democracy depend on it" (p. A42).

Much of the existing literature on college students and cultural diversity addresses efforts to understand diversity and how to change attitudes toward it. Surprisingly, there is little published research on the actual measurement of those attitudes. Assessment of existing attitudes, and of diversity's effect on students' daily life, could be of importance to university administrators or educators because it may influence future administrative and educational decisions. For example, is it important to students that they complete a required course in cultural diversity? What is the current social atmosphere between minority and majority students on campus? For instance, the retention of racially minority students has been linked to campus climate

(Ponterotto, Lewis, and Bullington, 1990). Educators would be well served by answers to questions such as these because they can effectively communicate student attitudes and beliefs about diversity in a college setting.

Clearly, there needs to be a reliable mechanism to measure attitudes about diversity, which could also be used to assess any degree of change caused by intervention programs specifically aimed at raising student awareness about diversity. A national database establishing benchmarks of cultural diversity on the college campus would help universities gain some perspective on what diversity climates are typical. In creating a new measure to assess diversity issues in a college setting, it is important to first briefly review information currently available about campus diversity.

Understanding Attitudes about Diversity

A substantial amount of research on cultural diversity addresses educational concerns. For instance, Steward, Gimenez, and Jackson (1995) stresses the importance of multicultural training for counselors. McCargar (1993) finds that individuals from different cultures have different expectations about teacher and student roles, and this may be an important concept to address in the training of future instructors. Globetti, Globetti, Brown, and Smith (1993) concluded that while majority and minority groups expressed similar degrees of diversity awareness, minority students expressed more multicultural sensitivity than majority students did. Both majority and minority students had a good understanding of the difficulties a person might have fitting in to a campus subculture (awareness), but majority groups often lacked appreciation for (sensitivity to) other groups.

Changing Attitudes About Diversity

Currently, a number of universities implement strategies to actively change students' current opinions about diversity. The goals of these interventions typically are raising awareness, improving sensitivity towards differing cultures, and/or enhancing intercultural communication (Carrell, 1997). Universities have also tried games, courses, or seminars as intervention techniques to increase cultural awareness (Carrion, 1997; Chahin, 1994). For example, DeVoe, McMillan, Zimmerman, and McGrew (1996) found that in coaching education one course was not sufficient to change attitudes about diversity or to overcome students' preexisting prejudice. They did report, however, that diversity-oriented programs were more welcomed than expected by some. Brusckke, Gartner, and Seiter (1993) used a simulation to educate college students about culture shock and ethnocentrism. They, interestingly, report that the simulation led students to be more favorable and motivated toward multicultural instruction, yet, it also led to increases in ethnocentrism. Grieger and D'Onofrio (1996) describe a three-part program entitled, "Free Your Mind," designed to help students to freely examine their own diversity beliefs and prejudices. Students were also encouraged to become an active part of the solution process and brainstorm possible ways to improve the current campus climate.

Measuring Attitudes about Diversity

To examine existing attitudes, as well as document and quantify changes, a measurement device or outcome variable is necessary. Globetti et al. (1993) have created

a five-item index, and Brusckhe et al. (1993) have developed a measure to assess levels of ethnocentrism. McClelland, Cogdal, Lease, and Londono-McConnell (1996) have created the Multicultural Assessment of Campus Programming Questionnaire, which asks participants how they feel about the university's commitment to diversity, their perception of majority and minority student relations on campus, and if campus programming efforts increase awareness and understanding of diversity. In this study, McClelland et al. (1996) found that faculty and staff perceive the institution as more culturally sensitive than students do. Also, they concluded that "cultivating an environment that values diversity can only be accomplished through innovative assessment and successful implementation of substantiated results" (p. 95). In a study by Sands (1998), undergraduate and graduate females supported a culturally diverse student body more than their male counterparts. While some specifically targeted diversity measures exist, it seems that there is no generally available instrument that can reliably and validly measure the diversity climate on a university campus.

Present Study

The goals of the present study included refining and improving an instrument developed previously, systematically collecting a baseline of campus diversity climate data that may be useful to universities, and creating a national database of information on campus diversity, so that institutions can assess their own measures in a national context.

Method

Participants

To study a national sample of college students, member schools of the Coalition of Urban and Metropolitan Universities were contacted and asked about their potential collaboration in this national project. Of the 53 institutions contacted, eleven participated,¹ and a total of 2,383 students completed surveys. Campus participant totals ranged from 89 to 350 students ($M = 216.6$, $SD = 79.4$). To focus on undergraduate education, graduate student data ($N = 206$) are excluded from this report, yielding an effective $N = 2,177$.

Participants were asked to respond to 23 statements on a five-point Likert-type scale with 1 = Strongly Disagree to 5 = Strongly Agree, and although two open-ended survey questions were asked as well, these data are excluded from the current analyses. Data collection responsibilities were left to the individual campus, and data were collected from participants as a convenience sample, such as extra credit for class, as part of a class assignment, or simply at different locations on campus.

Participants answered demographic questions, including gender, age, current class standing, and race. Of those responding to these specific questions, 59.2% were females and 40.8% were males. Age was asked in a binomial forced-choice format, with traditional (up to and including 24 years old) and nontraditional (25 years old and up)

¹These eleven are (presented in alphabetical order): Boise State University, San Jose State University, Southern Illinois University at Edwardsville, University of Louisville, University of South Florida, University of Tennessee at Chattanooga, University of Texas at San Antonio, Virginia Commonwealth University, Washburn University, Washington State University, and Wichita State University.

groups. In this sample, 80.7% of those responding were traditionally aged, and 19.3% selected the nontraditional category. In class standing, 34.4% were freshmen, 20.1% were sophomores, 21.6% were juniors, and 23.9% were seniors. To answer the demographic question about race, the following six categories were available (number in parentheses is response percentage): American Indian/Alaska Native (1.0%), black/African American (15.7%), Hispanic/Latino (13.5%), white/Caucasian (57.5%), Asian American/Pacific Islander (5.9%), and Other (6.4%). Participants could check as many categories as applied; if two or more were chosen, they, as well as write-in categories, were coded as Other.

Materials

The Campus Diversity Questionnaire (CDQ) is an original instrument (Landrum and Dillinger, 1999). It was created in accordance with standard test construction methods. A thorough review of the literature was included to ensure validity of the items that were selected and retained. The present study used a revised version of the original CDQ, referred to throughout as the Campus Diversity Questionnaire-Revised (CDQ-R). The CDQ-R is presented in Table 1.

Procedure

Each participating campus was sent 400 copies of the CDQ-R. In general, students needed about 15 minutes to complete the survey. After data collection was completed on individual campuses, the data were sent to the authors for coding, analysis, and interpretation.

Results and Discussion

As expected in a project of this magnitude, there are many outcomes to report: descriptive outcomes; campus, gender, age, year in school, and racial differences; correlational relationships, and psychometric qualities. Table 1 presents the descriptive outcomes, for all undergraduate students at all universities, providing a percentage of agreement and strong agreement (the "top two box scores") by statement. Following each portion of the results is a brief discussion of the specific outcome, and an overall summary of significant outcomes will be found in the Conclusions section.

Campus Differences

To examine campus differences by statement, analysis of variance (ANOVA) techniques were used. The detailed analyses of these and all further sections are available from the authors. All statements, except for Questions 3, 8, and 15, exhibited statistically significant differences by campus. This finding underscores the importance of studying diversity issues on more than one campus. If assessing trends is the goal of multicultural diversity climate research, it is clear from this finding that these studies should be conducted as a multi-institutional, collaborative effort.

Gender Differences

For 12 of the 23 questions, statistically significant gender differences emerged. In only one case (campus free from racial conflict) did males have significantly higher

Table 1
Percentage of Subjects who Agreed with Items on the CDQ-Revised

<i>Item</i>	<i>% Agreement</i>
1. The campus environment is free from racial conflict.	40.6
2. Friendships are more likely to be determined by common interests rather than by race.	72.8
3. This university actively promotes diversity.	57.5
4. As far as I know, minorities feel comfortable at this university.	61.7
5. My education on this campus has included exposure to the history and culture of minority groups.	57.2
6. In general, the relationship between minority and majority students is a friendly one.	70.1
7. I believe that the faculty, staff, and administration exhibit sufficient sensitivity to the multicultural needs of the campus.	61.8
8. I am aware of the content of my university's diversity plan.	21.9
9. Taking classes that emphasize multicultural diversity would enhance my education.	67.5
10. Recruitment of minority students is an institutional priority.	31.7
11. I have encountered racial discrimination on this campus.	21.9
12. I think that the core curriculum should require courses in multicultural diversity.	46.9
13. This university provides a new student orientation that adequately addresses multicultural diversity.	27.2
14. I feel comfortable going to any campus activity regardless of the racial composition of those who attend.	64.5
15. Hiring practices at this university indicate that racial/ethnic barriers are gradually eroding.	29.5
16. Where appropriate, professors address multicultural issues in the classroom.	67.4
17. Diversity on campus improves the quality of my education.	58.8
18. I am satisfied with my educational institution.	74.1
19. The faculty at this institution are sensitive to diversity issues.	50.6
20. Diversity enriches the educational experience.	79.0
21. Diversity promotes personal growth and a healthy society.	83.6
22. Diversity strengthens communities and the workplace.	82.4
23. Diversity enhances America's economic competitiveness.	70.8

Note: includes both those who "agreed" and those who "strongly agreed."

Demographic items:

24. Gender: Male Female
25. Age Group: Traditional (up to and including 24) Nontraditional (25 and up)
26. Current Class Standing: Freshman Sophomore Junior Senior Graduate Student
27. Race: American Indian/Alaska Native, Black/African American, Hispanic/Latino, White/Caucasian, Asian American/Pacific Islander, Other

Students were also asked:

28. What are the benefits or advantages (if any) to diversity?
29. What are the drawbacks or disadvantages (if any) to diversity?

averages than females. For all other questions (e.g., “taking classes,” “I am satisfied,” “diversity promotes personal growth,” “diversity strengthens communities”), females reported significantly higher averages than males. It seems that females may be more aware of racial conflicts on campus than males, and also that females tend to recognize, value, and appreciate diversity efforts on campus. These results are similar to those found by Sands (1998).

Age Differences

Respondents were asked to select an age group category: traditional (up to and including 24 years old) and nontraditional (25 years old and up). Significant differences appeared for the statements, “minorities feel comfortable,” and “new student orientation,” traditionally-aged students scored significantly higher, while nontraditionally-aged students scored significantly higher on “education has included exposure to the history, culture of minority groups,” “core curriculum,” “diversity enriches the educational experience,” “diversity promotes personal growth,” “diversity strengthens communities,” and “diversity enhances America’s economic competitiveness.” In general, when differences do exist, nontraditional students tend to agree more with statements that address the value of diversity, especially in its role in the educational environment.

Year in School Differences

Significant differences emerge among freshman, sophomore, junior, and senior undergraduates on 15 of the 23 questions. Junior and senior level students agreed more with the statements, “taking classes that emphasize multicultural diversity would enhance my education,” “I have encountered racial discrimination on this campus,” “core curriculum,” “diversity on campus improves the quality of my education,” “diversity enriches the educational experience,” “diversity promotes personal growth,” “diversity strengthens communities,” and “diversity enhances America’s economic competitiveness.” Not only are juniors and seniors more likely to have seen discrimination on campus, but they place a significantly higher value on diversity in the college setting.

Freshman and sophomore students agreed significantly more with statements such as “the campus is free from racial conflict,” “friendships are more likely to be determined by common interests rather than by race,” “minorities feel comfortable on this campus,” “I feel comfortable going to any campus activity,” and “I am satisfied.” Younger students’ agreement with these statements may reflect less time on the college campus. It could also be that these students, earlier in their academic careers, are more naïve about race relations on campus. It seems clear, however, that to understand the diversity climate of a college campus, the student’s year in school is an important factor.

Relationship to Educational Satisfaction

One of the CDQ-R statements refers specifically to educational satisfaction (“I am satisfied with my educational institution”). Educational satisfaction is significantly negatively correlated with the statement, “I have encountered racial discrimination on this campus.” Educational satisfaction is significantly positively correlated with all

other statements except, "I think that the core curriculum should require courses in multicultural diversity." Of particular note are positive correlations with educational satisfaction greater than +0.30, including "the faculty at this institution are sensitive to diversity issues" (+0.40), "faculty, staff, and administration exhibit sufficient sensitivity to the multicultural needs of the campus" (+0.37), "minorities feel comfortable at this campus" (+0.32), and "the relationship between minority and majority students is a friendly one" (+0.32). Educational satisfaction is related to faculty sensitivity and quality (and comfort) of relationships between minority and majority students. For those who may not be motivated to improve diversity relations and derive the benefits described in the *Chronicle* (1999) article, these findings may provide additional motivation. Educational satisfaction is significantly related to diversity and relationship issues.

Racial Differences

The CDQ-R is particularly sensitive to differences among racial groups. Every statement exhibited a statistically significant difference across racial groups. On a number of statements, black/African American students tend to agree less, and often significantly less, with other racial groups. This occurred most clearly on statements such as "the campus is free from racial conflict," "friendships are more likely to be determined by common interests," "the university actively promotes diversity," "faculty, staff, and administration exhibit sufficient sensitivity to the multicultural needs of this campus," "hiring practices indicate that racial/ethnic barriers are eroding," "professors address multicultural needs in the classroom," "I am satisfied," and "the faculty at this institution are sensitive to diversity issues." It seems clear that black/African American students have a significantly different picture of racial relations on campus. Thus, in any effort to address diversity issues on the college campus, the different perceptions of constituent parties must be understood from that party's own perspective.

On some statements, black/African American students, along with another racial group, agreed less in comparison to the other racial groups. For example, black/African American students and American Indian/Alaska Native students agreed significantly less with "minorities feel comfortable at this university" and "the relationship between minority and majority students is a friendly one." Black/African American students and Hispanic/Latino students agreed significantly less with white/Caucasian students on the statement, "recruitment of minority students is an institutional priority." American Indian/Alaska Native students agreed significantly less often than other students on questions such as "this university provides a new student orientation that adequately addresses multicultural diversity," "I feel comfortable going to any campus activity," "diversity strengthens communities," and "diversity enhances America's economic competitiveness." American Indian/Alaska Native students, along with white/Caucasian students, agreed significantly less with the questions "diversity enriches the educational experience" and "diversity promotes personal growth." American Indian/Alaska Native students may be expressing more difficulties with social situations on campus, and, along with white/Caucasian students on some questions, appear to value diversity less than other racial groups.

For a number of statements, “I am aware of my university’s diversity plan,” “I have encountered racial discrimination on this campus,” “core curriculum,” and “diversity on campus improves the quality of my education,” white/Caucasian students agreed significantly less than other racial groups. Based on these statements, and those already mentioned, white/Caucasian students’ perceptions about diversity clearly differ from other racial groups. White/Caucasian students tend to see less value in diversity and know less about diversity efforts on campus, perhaps because they, currently the majority group on these campuses, have experienced less racial discrimination. The prudent approach is to use an instrument such as the CDQ-R to continually measure and gauge the multicultural climate on the university campus.

Psychometric Qualities

This revision of the Campus Diversity Questionnaire demonstrated improved psychometric qualities compared to the original CDQ (Landrum and Dillinger, 1999). Reliability analyses of the 23 statements showed a Cronbach’s score of 0.8039, indicating good reliability. Construct and content validity issues were addressed using factor analysis. Using a varimax rotation, eigenvalue > 1 , and factor loadings $> .50$, a four-factor model explained 52.1% of the variance. The first factor is a summary, or global, factor that addresses the advantages of diversity. The positive effects and benefits of diversity tend to be clustered in participants’ responses to particular statements. The second factor that emerged from the analysis is interpersonal diversity; that is, how students interact personally and socially with one another on campus. This addresses the importance of the relationships and daily interactions students have with others.

The third factor was instructional diversity, from a series of statements focused on faculty and the classroom. Professors and classroom experiences clearly impact students’ perceptions of the diversity climate. Some diversity issues span institutional concerns and are not just limited to interpersonal or instructional situations, so the fourth factor appearing from the analysis was institutional diversity. All in all, these factors—interpersonal, instructional, and institutional diversity—correspond nicely with the previous version of the CDQ (Landrum and Dillinger, 1999), providing good evidence for content and construct validity of the CDQ-R.

Conclusions

What is the diversity climate on college and university campuses today? To borrow a metaphor, it is partly cloudy or partly sunny, depending on whom you ask. Seventy percent or more of all undergraduate students surveyed value diversity highly—to enrich their educational experience, for personal growth and a healthy society, to strengthen the community and the workplace, and to enhance America’s competitiveness. A closer examination of the subgroups in this study (by institution, gender, age, year in school, and race) indicates complex relationships and differences among groups on many diversity issues.

With respect to gender differences, females tend to value diversity and appreciate its positive effects more than males. When considering age, nontraditional students

also value diversity more, and desire more education that directly addresses diversity issues. Students' class standing (year in school) also affects their opinions about diversity; students further along in their academic careers have seen more discrimination on campus, and they also place higher value on diversity initiatives.

A host of racial differences emerged from this study, as evidenced by statistically significant differences on all 23 Likert-type agreement-disagreement statements. Black/African American students, and sometimes American Indian/Alaska Native students, tend to have a more bleak view of diversity concerns, especially in the areas of racial conflict, promotion of diversity, and sensitivity of faculty and staff to diversity. White/Caucasian students, on the other hand, often have a more optimistic and perhaps unrealistic perception of diversity issues on campus. These students tend not to recognize the magnitude of racial discrimination and agree less with different approaches to strengthening diversity efforts on campus. The results of this study clearly indicate that these issues must be addressed from each student's perspective in attempting to understand the environment and context in which all students operate.

For many members of the university community, the advantages to diversity as presented in this report are motivation enough to pursue an enhanced diversity climate. For those not intrinsically motivated to work for these goals, however, it is interesting to note that satisfaction with one's educational institution was significantly positively related to whether faculty were sensitive to diversity, relationships were comfortable between majority and minority students, and minorities were comfortable. If diversity itself is not a motivator to change, perhaps increasing educational satisfaction through diversity issues can provide an additional incentive.

Kleeman (1994) concluded that for campuses to place a greater emphasis on diversity, there are five key factors to success: (a) a belief in self and the realization of a need for change; (b) financial support from the institution; (c) academic skills and support for students; (d) social support, and (e) family and community support. Attaining these five goals may be difficult for a university; however, the rewards of a culturally heterogeneous campus may be long-lasting for students, instructors, administrators, and the nation, as the *Chronicle* article suggested.

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