DIVERSE LEARNING ENVIRONMENTS SURVEY INSTRUMENT: INTRODUCTION AND SELECT FACTORS

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For Committees, Student Affairs Units, and Student Research

Why Assess Diversity on Campus?

- Move from reactive stance to proactive stance
- Research now demonstrates that diversity is an asset in learning—we need to know more about creating the conditions to optimize engagement and desired outcomes
- Understand the experiences of target populations to diminish inequity and improve experiences
- Understand how to improve services to meet student needs

Transformation is fostered by both external and a strong internal impetus for equity and improvement.

Conceptualization of Diverse Learning Environments and Assessment

- Built on a growing body of research with diverse populations as the focus
- HERI reviewed 90+ previous instruments used to assess diversity and campus climate
- Built on previous models of the environment, multiple contexts of student experience
- Built a survey that linked climate (perceptions and behaviors), practices (what institutions do) with student outcomes

Diversity is embedded in the core educational and public service mission of the institution.
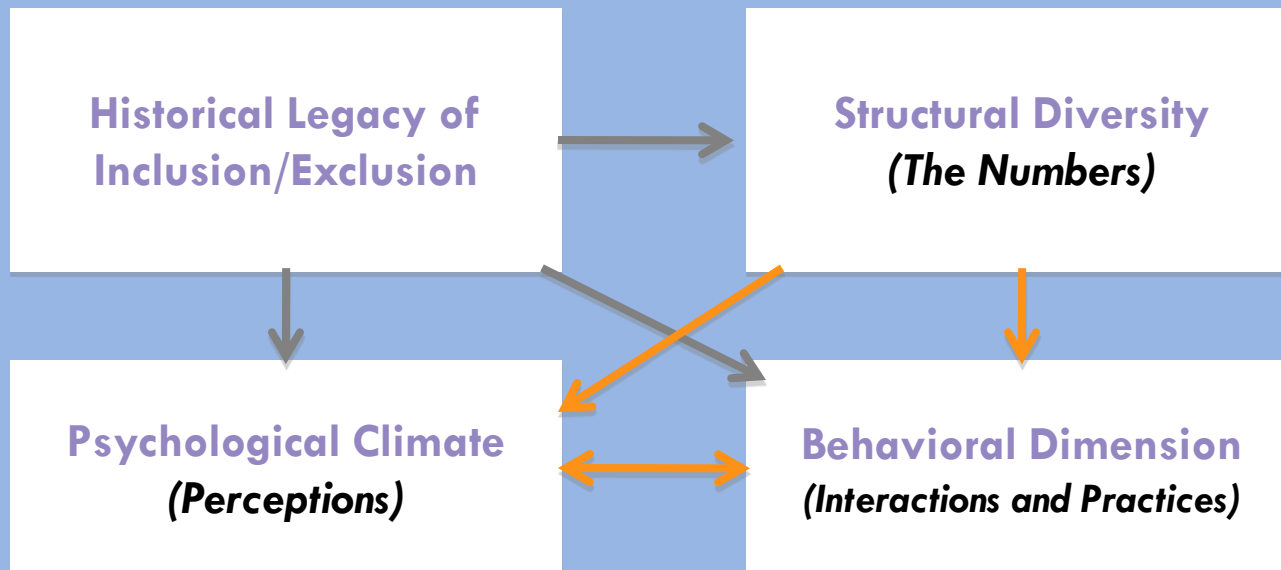
DLE Instrument

- Integrated assessment of climate, diversity practice, and outcomes

- Inclusive of diverse social identities

- Modules targeting specific topics

- Longitudinal, or encourage its use linked with other student data

- Widely available

Campus Climate for Diversity

Government/Policy Context   Sociohistorical Context

Historical Legacy of Inclusion/Exclusion

Structural Diversity
(The Numbers)

Psychological Climate
(Perceptions)
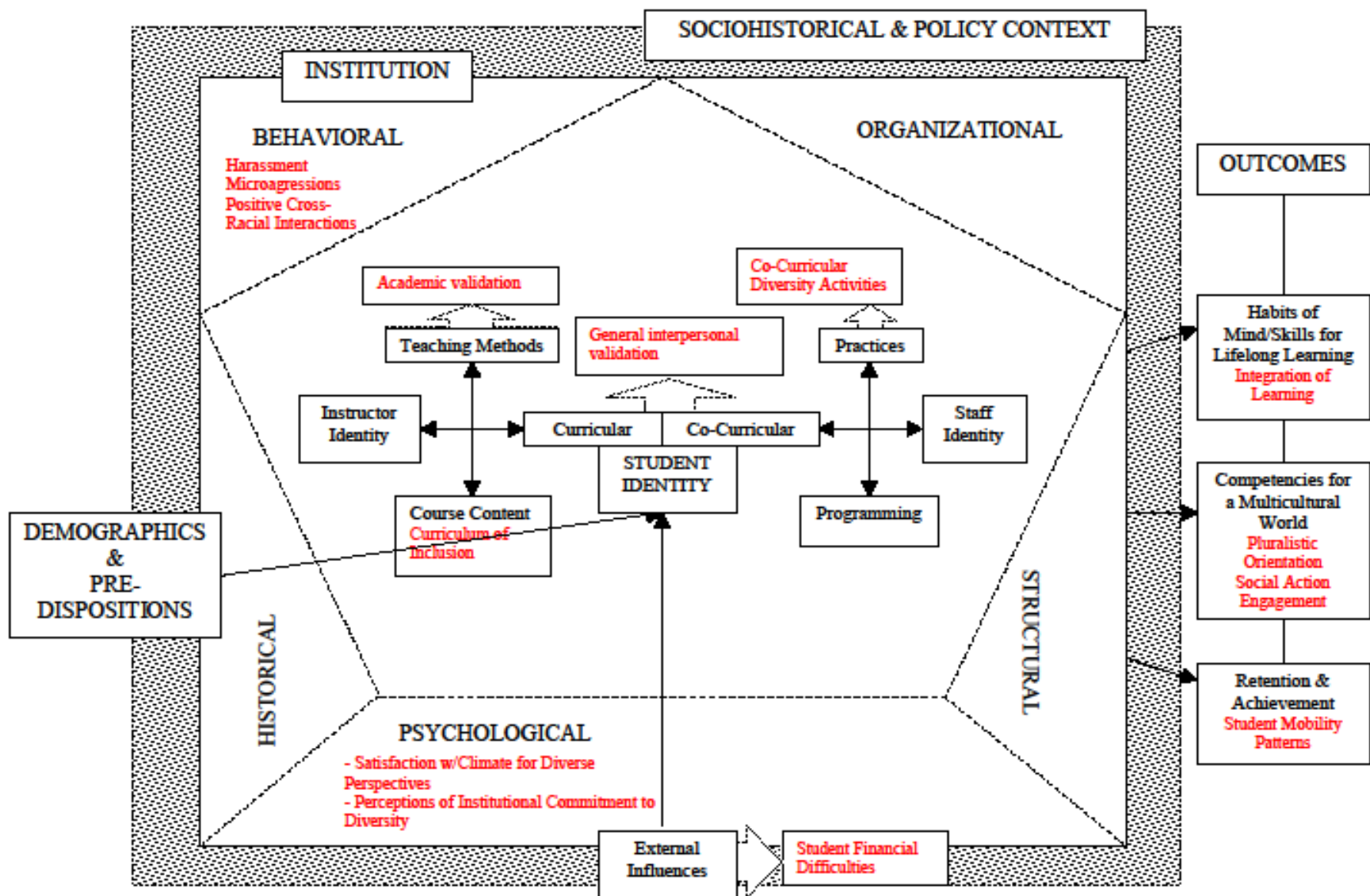
Behavioral Dimension
(Interactions and Practices)

(Hurtado, Milem, Clayton-Pedersen, & Allen, 1999)

Conceptual Framework

- Survey development was based on research on diverse student populations which led to DLE framework

- Campus should link climate with actual programs and practices, and student participation in educational activity associated with diversity

- The next slide provides the framework with examples of items from the survey (indicated in red)

SOCIOHISTORICAL & POLICY CONTEXT

INSTITUTION

BEHAVIORAL

Harassment
Microagressions
Positive Cross-
Racial Interactions

ORGANIZATIONAL

OUTCOMES

Academic validation

Co-Curricular
Diversity Activities

Teaching Methods

General interpersonal
validation

Practices

Habits of
Mind/Skills for
Lifelong Learning
Integration of
Learning

Instructor
Identity

Curricular

Co-Curricular

Staff
Identity

STUDENT
IDENTITY

Course Content
Curriculum of
Inclusion

Programming

Competencies for
a Multicultural
World
Pluralistic
Orientation
Social Action
Engagement

DEMOGRAPHICS
&
PRE-
DISPOSITIONS

HISTORICAL

STRUCTURAL

Retention &
Achievement
Student Mobility
Patterns

PSYCHOLOGICAL

- Satisfaction w/Climate for Diverse
Perspectives
- Perceptions of Institutional Commitment to
Diversity

External
Influences

Student Financial
Difficulties

Diverse Learning Environments Conceptual Framework.

Key Survey Themes and Constructs

Climate (Perceptions, Behaviors)

- Discrimination and Harassment
- Positive Cross-racial Interaction
- Negative Cross-racial Interaction
- Institutional Commitment to Diversity
- Academic Validation in the Classroom
- Satisfaction with Diverse Perspectives
- Student Financial Difficulty
- Interpersonal Validation
- Sense of Belonging

Practices and Outcomes

Student Participation in:

- Curriculum of Inclusion
- Co-Curricular Diversity Activities
- Student Support Services

Select Outcomes:

- Integration of Learning
- Habits of Mind
- Pluralistic Orientation
- Social Action
- Civic Engagement

The DLE at UCSD

- Administered in Spring 2011
- Invitations sent to 14,000 UCSD Students

    -2,026 Complete Responses

    -Approximately 15% Response Rate

    -Four reminders

    -Incentives

The DLE Survey at UCSD

- Over-Sampled URM Students

  -All African American Students

  -75% of all Mexican-American Students

- Over-Sampled by Class Level

  -Juniors and Seniors

Table 1
DLE Respondents by Racial/Ethnic Grouping

Racial/Ethnic Grouping				
Racial-Ethnic Grouping	Frequency	Survey Percent	Fall 2010 Third Week	Difference
AFR-AMER	70	3.5	1.8	1.68
ASIAN	818	40.4	44.7	-4.37
MEXICAN-AM	261	12.9	10.8	2.08
FILIPINO	63	3.1	4.2	-1.06
LATINO	57	2.8	3.0	-0.17
NATIVE AMER	15	.7	.5	0.25
WHITE	441	21.8	24.9	-3.09
OTHER	301	14.9	10.2	4.69
Total	2026	100.0	100.0	

Campus Climate Construct Scores by Racial-Ethnic Grouping

- URM=African, Mexican, and Native-American Respondents Were Combined Due to Relatively Low Participation rates

- Comparison Groups were Asian, White, and Other Student Groupings

- Factor Scores Derived and Means Compared
  - Analysis of Variance
  - Post-Hoc Tests
  - Effect Size

- Comparison with Scores from HERI National Sample

Table 2
DLE Respondents by Class Level

	Frequency	Valid Percent
FRESHMAN	103	5.3
SOPHOMORE	340	17.5
JUNIOR	490	25.3
SENIOR	1005	51.9
Total	1938	100.0
Missing	88	
Total	2026	

CLIMATE

- Harassment
- Positive Cross-Racial Interactions
- Negative Cross-Racial Interactions
- Institutional Commitment to Diversity
- Academic Validation in the Classroom
- General Interpersonal Validation
- Sense of Belonging

DLE Factor Scores or Climate Constructs

- DLE Factor Scores are Useful for

  - Benchmarking

  - Measuring Comparative Experiences of Different Student Groupings

  - DLE factor scores have a range from 1-100 and a mean of 50

  - National Comparison Scores Provided by HERI

  - National Scores Enable Comparison of UCSD Responses to Public Colleges and Universities from HERI's DLE sample.

  - Comparison data may be found at: (http://studentresearch.ucsd.edu/sriweb/Surveys/DLE2011/DLE_2011_Total.pdf)

Sense of Belonging

- Comprises cognitive and affective elements
  - Cognitive level: information about experiences with a group as a whole and other group members
  - Affective level: feelings that reflect the individual's appraisal of their experiences with the group
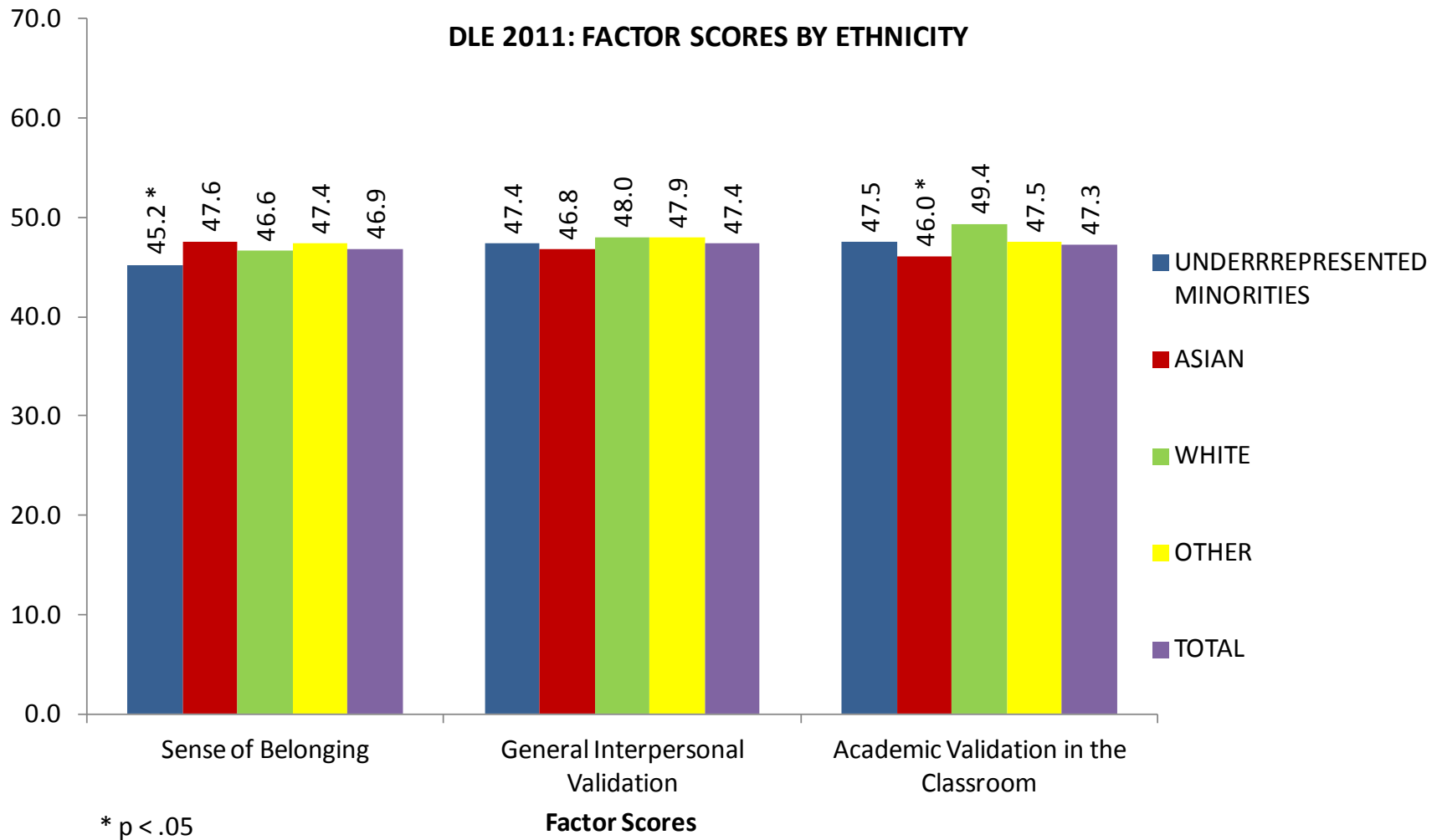
(Bollen & Hoyle, 1990)

- Original factor items
  - I feel a sense of belonging to …
  - I feel that I am a member of the … community
  - I see myself as part of the … community

Sense of Belonging

- Utilized in higher education research as a psychological sense of integration
  - Illustrates the interplay between the individual and the institution (Hurtado & Carter, 1997)

- Original Bollen & Hoyle (1990) items modified to include broader concepts of cohesion
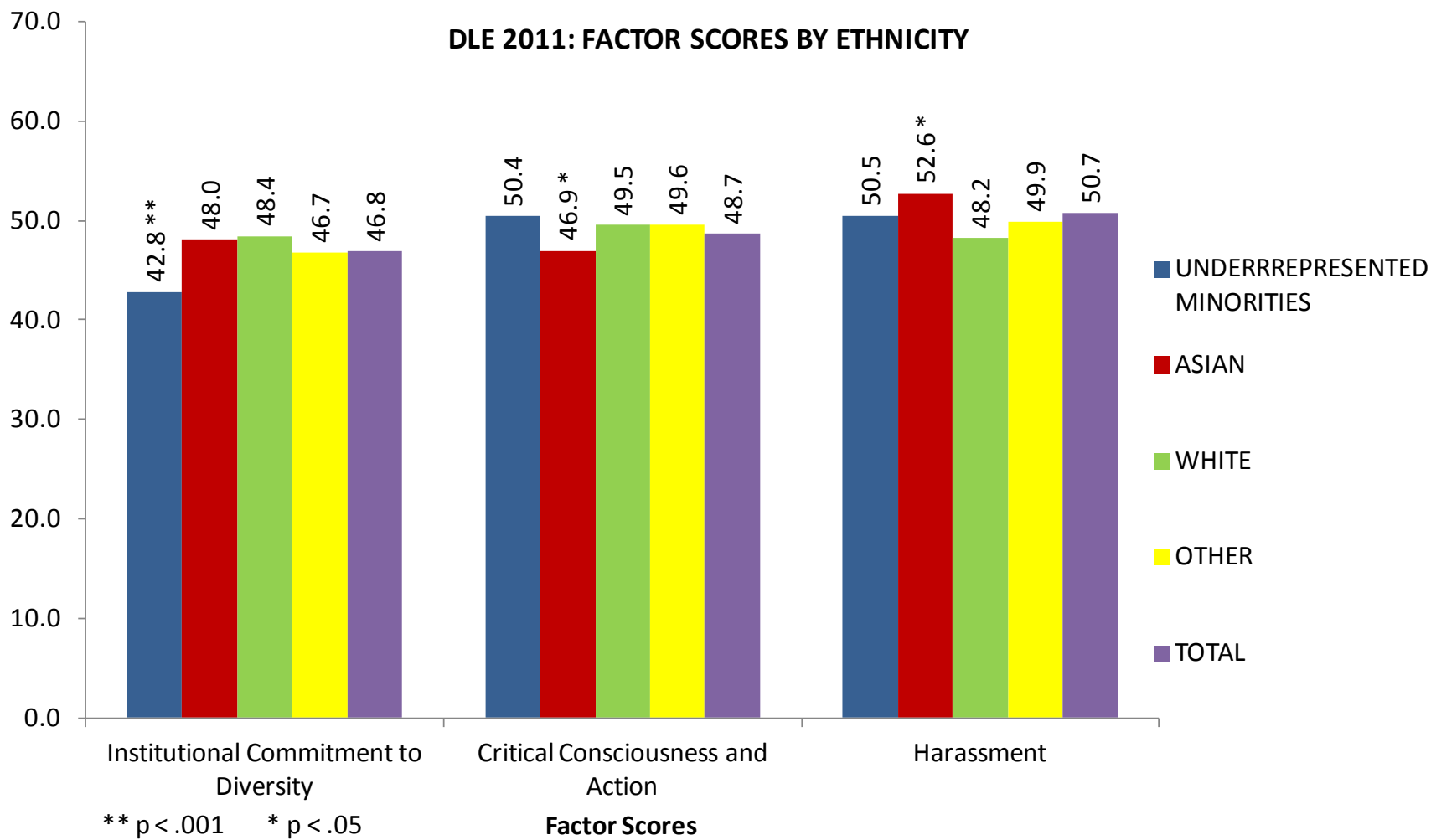
- DLE uses the original construct

DLE 2011: FACTOR SCORES BY ETHNICITY

Legend:
- UNDERRREPRESENTED MINORITIES
- ASIAN
- WHITE
- OTHER
- TOTAL

Sense of Belonging: 45.2 *, 47.6, 46.6, 47.4, 46.9

General Interpersonal Validation: 47.4, 46.8, 48.0, 47.9, 47.4

Academic Validation in the Classroom: 47.5, 46.0 *, 49.4, 47.5, 47.3

Factor Scores

* p < .05

Sense of Belonging

☐ URM Students Have Lower Scores on this Construct than Comparison Groupings

  ◻ Differences Statistically Significant (p.05)

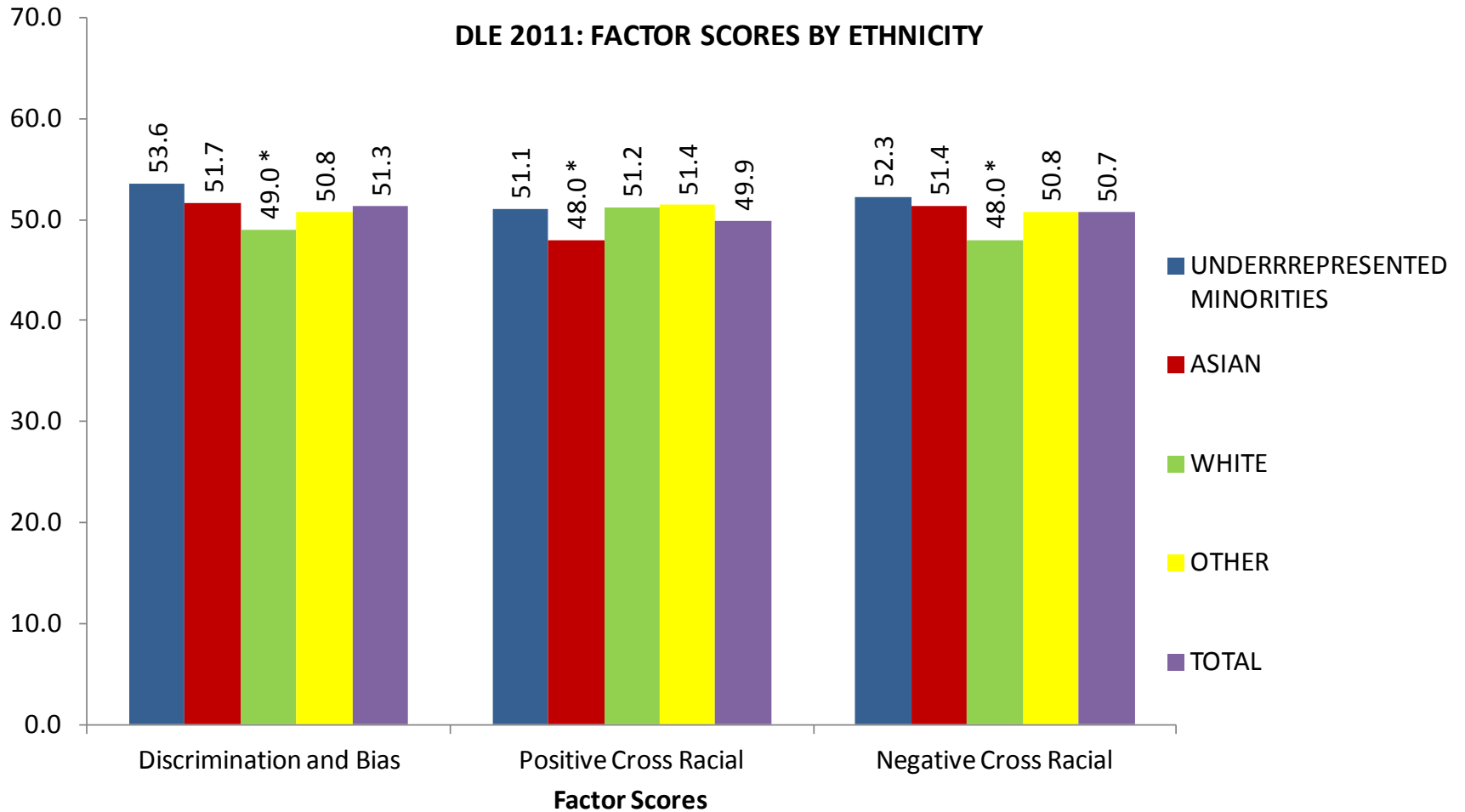 ◻ However, Magnitude of Difference or Effect Size is Small

Academic Validation in the Classroom

- **Academic Validation in the Classroom** measures the extent to which students' view of course materials and method reflect concern for their academic success

  - Asian-American Students Tend to Have Significantly Lower Scores on this Construct ($p < .05$)

  - Effect Size of these Differences is Modest
    (η sq. $= .018$)

DLE 2011: FACTOR SCORES BY ETHNICITY

Institutional Commitment to Diversity: 42.8 **, 48.0, 48.4, 46.7, 46.8

Critical Consciousness and Action: 50.4, 46.9 *, 49.5, 49.6, 48.7

Harassment: 50.5, 52.6 *, 48.2, 49.9, 50.7

** p < .001   * p < .05

Factor Scores

Legend:
- UNDERRREPRESENTED MINORITIES
- ASIAN
- WHITE
- OTHER
- TOTAL

- **Institutional Commitment to Diversity** is a measure of a student's perception of the campus' commitment to diversity.
  - URM Students Display Significantly Lower Score on this Construct ($p < .01$; η sq. $= .047$)

- **Critical Consciousness and Action** is a unified measure of how often students critically examine and challenge their own and others' biases
  - Asian-American Students have Significantly Lower Scores on this Construct

- **Harassment** measures the frequency that students experience threats or harassment
  - Asian-American Respondents Show Higher Scores on this Climate Score than Comparison Groupings

- Harassment and Critical Consciousness Score Differences (Effect Size) was Small (η sq. $= .02$)

DLE 2011: FACTOR SCORES BY ETHNICITY

Legend: UNDERRREPRESENTED MINORITIES, ASIAN, WHITE, OTHER, TOTAL

Factor Scores	Underrepresented Minorities	Asian	White	Other	Total
Discrimination and Bias	53.6	51.7	49.0 *	50.8	51.3
Positive Cross Racial	51.1	48.0 *	51.2	51.4	49.9
Negative Cross Racial	52.3	51.4	48.0 *	50.8	50.7

* p < .05

DLE Student Experiences and Perceptions

- **Discrimination and Bias** measures the frequency of students' experiences with more subtle forms of discrimination

  - Discrimination and Bias Scores were Lowest for White Students ($p<.05$)

- **Positive Cross-Racial Interaction** is a unified measure of students' level of positive interaction with diverse peers.

  - Positive Cross-Racial Interaction Scores Were Lowest for Asian Students

- **Negative Cross-Racial Interaction** is a unified measure of students' level of negative interaction with diverse peers.

  - Experiencing Negative Cross-Racial Interactions Were Lowest for White Students

PRACTICES

- Curriculum of Inclusion
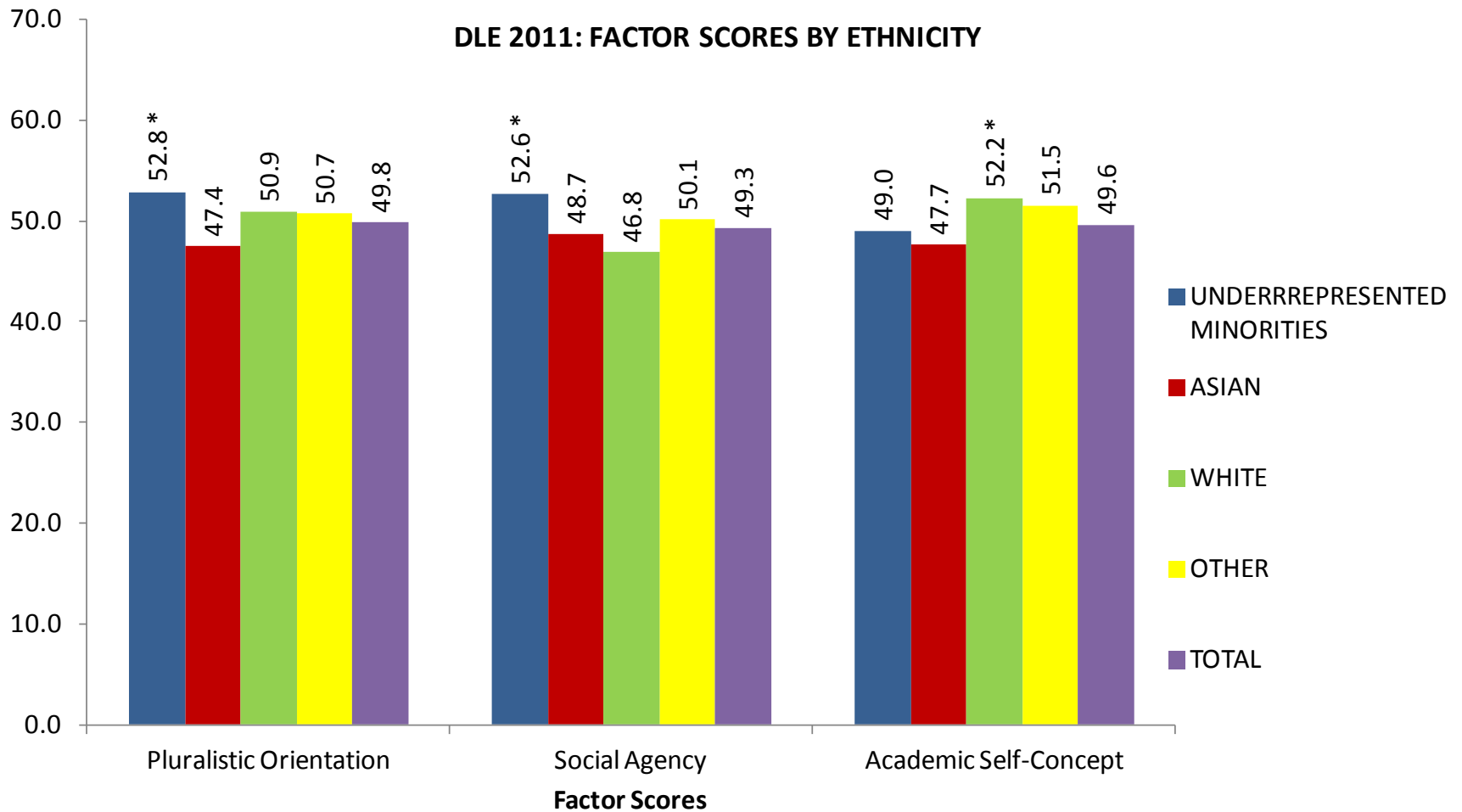- Co-Curricular Diversity Activities (Campus-Facilitated)

DLE 2011: FACTOR SCORES BY ETHNICITY

Conversations Across Differences: UNDERRREPRESENTED MINORITIES 50.1, ASIAN 46.4 *, WHITE 50.6, OTHER 50.3, TOTAL 48.7

Curriculum of Inclusion: UNDERRREPRESENTED MINORITIES 50.1, ASIAN 48.0, WHITE 48.3, OTHER 48.2, TOTAL 48.5

Co-curricular Diversity Activities (Campus-facilitated): UNDERRREPRESENTED MINORITIES 51.8 *, ASIAN 49.5, WHITE 47.7, OTHER 50.5, TOTAL 49.7

Legend: UNDERRREPRESENTED MINORITIES, ASIAN, WHITE, OTHER, TOTAL

* p < .05

Factor Scores

DLE Student Experiences and Perceptions

- **Conversations Across Difference** measures how often students have in-depth conversations with diverse peers.

  - Scores were Lowest for Asian Students ($p<.05$)

- **Co-Curricular Diversity Activities (Campus-facilitated)** is a measure of students' involvement with institutional programs focused on diversity issues.

  - URM and Other Students Have Higher Scores on this Construct

- No Statistical Differences Found for the **Curriculum of Inclusion** Factor Score

OUTCOMES

- Integration of Learning
- Pluralistic Orientation
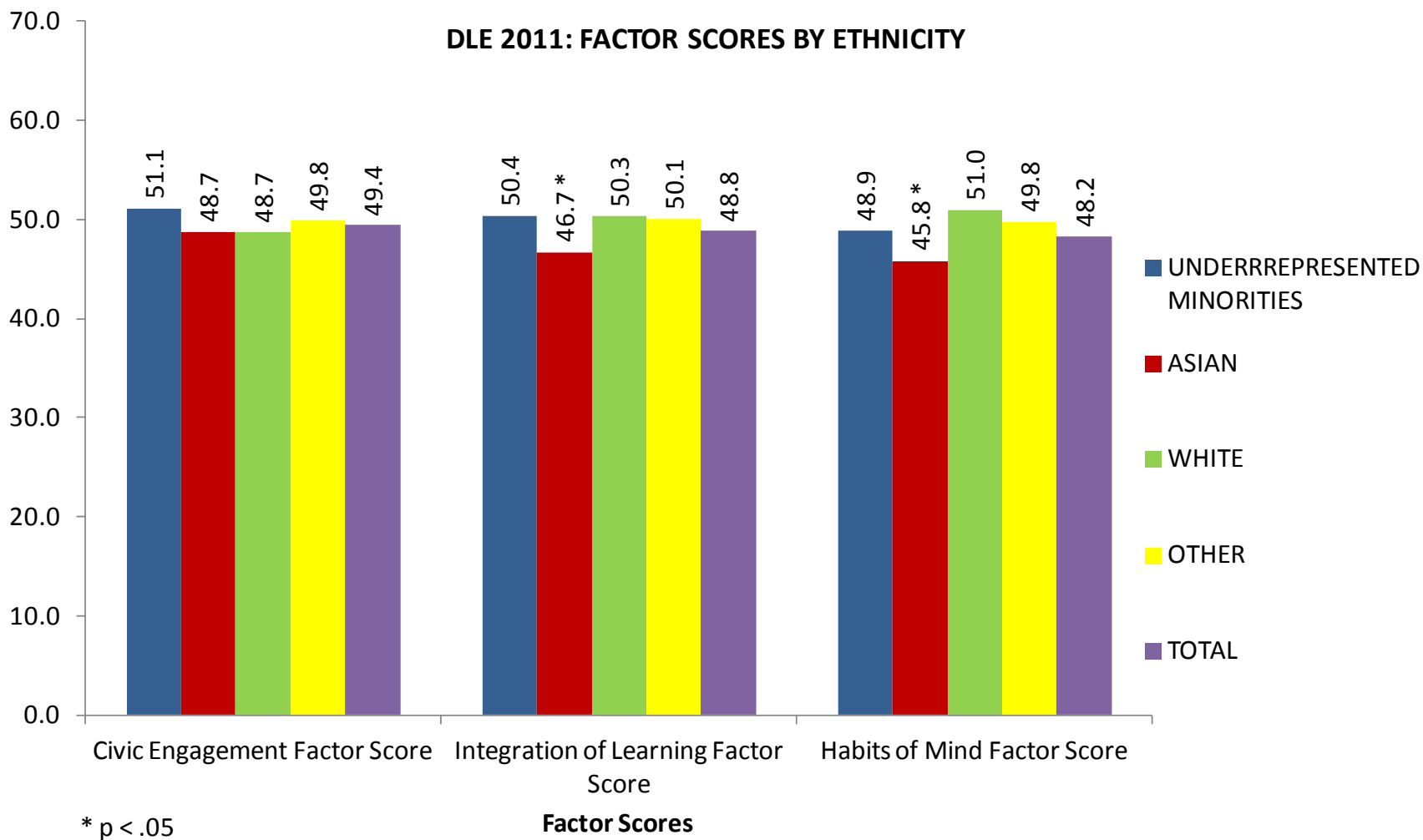- Social Action Engagement
- Civic Action

DLE 2011: FACTOR SCORES BY ETHNICITY

Factor Scores

* p < .05

DLE Student Experiences and Perceptions

- **Pluralistic Orientation** measures skills and dispositions appropriate for living and working in a diverse society

    - URM Students Show Significantly Higher Scores on this Factor Score ($p<.05$)

- **Social Agency** measures the extent to which students' value political and social involvement as a personal goal

    - URM Have Higher Scores on this Construct ($p<.05$)

- **Academic Self-Concept** is a unified measure of students' beliefs about their abilities and confidence in academic environments

    - Asian and URM Students Showed Lower Scores than White or Other Students

DLE 2011: FACTOR SCORES BY ETHNICITY

Civic Engagement Factor Score: UNDERREPRESENTED MINORITIES 51.1, ASIAN 48.7, WHITE 48.7, OTHER 49.8, TOTAL 49.4

Integration of Learning Factor Score: UNDERREPRESENTED MINORITIES 50.4, ASIAN 46.7 *, WHITE 50.3, OTHER 50.1, TOTAL 48.8

Habits of Mind Factor Score: UNDERREPRESENTED MINORITIES 48.9, ASIAN 45.8 *, WHITE 51.0, OTHER 49.8, TOTAL 48.2

Legend: UNDERRREPRESENTED MINORITIES, ASIAN, WHITE, OTHER, TOTAL

Factor Scores

* $p < .05$

DLE Student Experiences and Perceptions

- **Civic Engagement** measures the extent to which students are involved in civic, electoral, and political activities

  - Scores Are Approximately Similar Across Groupings

- **Integration of Learning** is a measure of student behavior that reflects integrating, connecting, and applying concepts and ideas

  - Small Differences Found on this Measure, however the magnitude of the Score Differences was Very Small

- **Habits of Mind** is a unified measure of the behaviors and traits associated with academic success. These learning behaviors are seen as the foundation for lifelong learning

  - Asian Students Show Lower Scores on this Construct with Respect to the Comparison Groupings

Discussion

- Empirically identified useful constructs of validation to capture student experience

- Useful in revised conceptual models for retention and future research

- Student sense of integration and ability to "navigate" the institution are related to validation and sense of belonging, helping students to persist and learn

Resources

www.heri.ucla.edu

☐ <u>Publication</u>:

Hurtado, S., Griffin, K.A., Arellano, L., Cuellar, M. (2008). Assessing the value of climate assessments: Progress and future directions. *Journal of Diversity in Higher Education 1*(4), 204-221. (Special Issue on climate).

☐ http://heri.ucla.edu/dle DLE website for presentations, papers, research updates

☐ Instruments: Registration open for HERI faculty survey, The Freshman Survey, YFCY, CSS, and DLE

☐ New research: Diverse Learning Environments, STEM longitudinal study, and Retention

☐ Additional UCSD DLE Data on Student Research website:

☐ **http://studentresearch.ucsd.edu/sriweb/Surveys/dle.html**

Background and Technical Data for the DLE Instrument and Factor Scores

Harassment (α = 0.917)

Please indicate how often at this institution you have:

Please indicate how often you have experienced the following forms of bias/harassment/discrimination while at this institution:

Items	Factor Loadings
Reported an incident of discrimination to a campus authority	.685
Threats of physical violence	.912
Physical assaults or injuries	.935
Anonymous phone calls	.844
Damage to personal property	.794

Robust ML Model-Fit Results
NFI = 0.958; CFI = 0.961; RMSEA = 0.047

Reporting Discrimination: Frequencies

Please indicate how often at this institution you have:

Reported an incident of discrimination to a campus authority

Scale	n = 4,525 (%)
Never	4,025 (89.0%)
Seldom	244 (5.4%)
Sometimes	143 (3.2%)
Often	76 (1.7%)
Very Often	37 (0.8%)

Institutional Commitment to Diversity (α = .857)

Indicate the extent to which you agree or disagree with the following. This institution:

Items	Factor Loadings
Has a long standing commitment to diversity	.745/.651
Accurately reflects the diversity of the student body in publications (e.g. brochures, website, etc.)	.725/.631
Rewards staff and faculty for their participation in diversity efforts	.650/.666
Appreciates differences in sexual orientation	.682/.711
Promotes the appreciation of cultural differences	.706/.698
Has campus administrators who regularly speak about the value of diversity	.638/.724
Promotes the understanding of gender differences	.624/.665

Robust ML Model-Fit Results
NFI = .892/. 958; CFI = .893/.959; RMSEA = .118/.079

Microaggressions (α = 0.889)

Please indicate how often at this institution you have:

Please indicate how often you have experienced the following forms of bias/harassment/discrimination while at this institution:

Items	Factor Loadings
Witnessed discrimination	.758/.750
Been mistaken as a member of a racial/ethnic group that is not your own	.454/.444
Heard insensitive or disparaging remarks from students	.685/.644
Heard insensitive or disparaging remarks from faculty	.751/.677
Heard insensitive or disparaging remarks from staff	.741/.664
Verbal comments	.775/.792
Written comments (e.g. emails, texts, writing on walls, etc.)	.753/.762
Exclusion (e.g. from gatherings, events, etc.)	.716/.746
Offensive visual images or items	.735/.733

Robust ML Model-Fit Results
NFI = .698/.955; CFI = .700/.958; RMSEA = .138/.056

Positive Cross-Racial Interactions (α =0.882)

To what extent have you experienced the following with students from a racial/ethnic group other than your own?

Indicate how often you have engaged in each of the following at this institution:

Items	Factor Loadings
Attended events sponsored by other racial/ethnic groups	.585/.557
Dined or shared a meal	.755/.712
Had meaningful and honest discussions about race/ethnic relations outside of class	.776/.764
Shared personal feelings and problems	.793/.803
Had intellectual discussions outside of class	.803/.823
Studied or prepared for class	.644/.652
Socialized or partied	.702/.666
Made an effort to get to know people from diverse backgrounds	.513/.519

Robust ML Model-Fit Results
NFI = .955/.980; CFI = .957/.981; RMSEA = .085/.060

Satisfaction with Diverse Perspectives on Campus (α = 0.873)

Please rate your satisfaction with this campus:

Items	Factor Loadings
Atmosphere for political differences	.874
Atmosphere for religious differences	.889
Campus-wide respect for the expression of diverse beliefs and experiences	.745

Robust ML Model-Fit Results
NFI = 1.000; CFI = na; RMSEA = na

Academic Validation in the Classroom (α = .863)

Please indicate how often you have experienced the following <u>in</u> <u>class</u> at this institution:

Items	Factor Loadings
Instructors were able to determine my level of understanding of course material	.753/.776
Instructors provided me with feedback that helped me judge my progress	.818/.842
I feel like my contributions were valued in class	.810/.811
Instructors encouraged me to meet with them after or outside of class	.651/.582
Instructors encouraged me to ask questions and participate in discussions	.717/.673
Instructors showed concern about my progress	.611/.588

Robust ML Model-Fit Results
NFI = .927/.986; CFI = .928/.986; RMSEA = .126/.062

General Interpersonal Validation (α = .862)

Please indicate the extent to which you agree or disagree with the following statements:

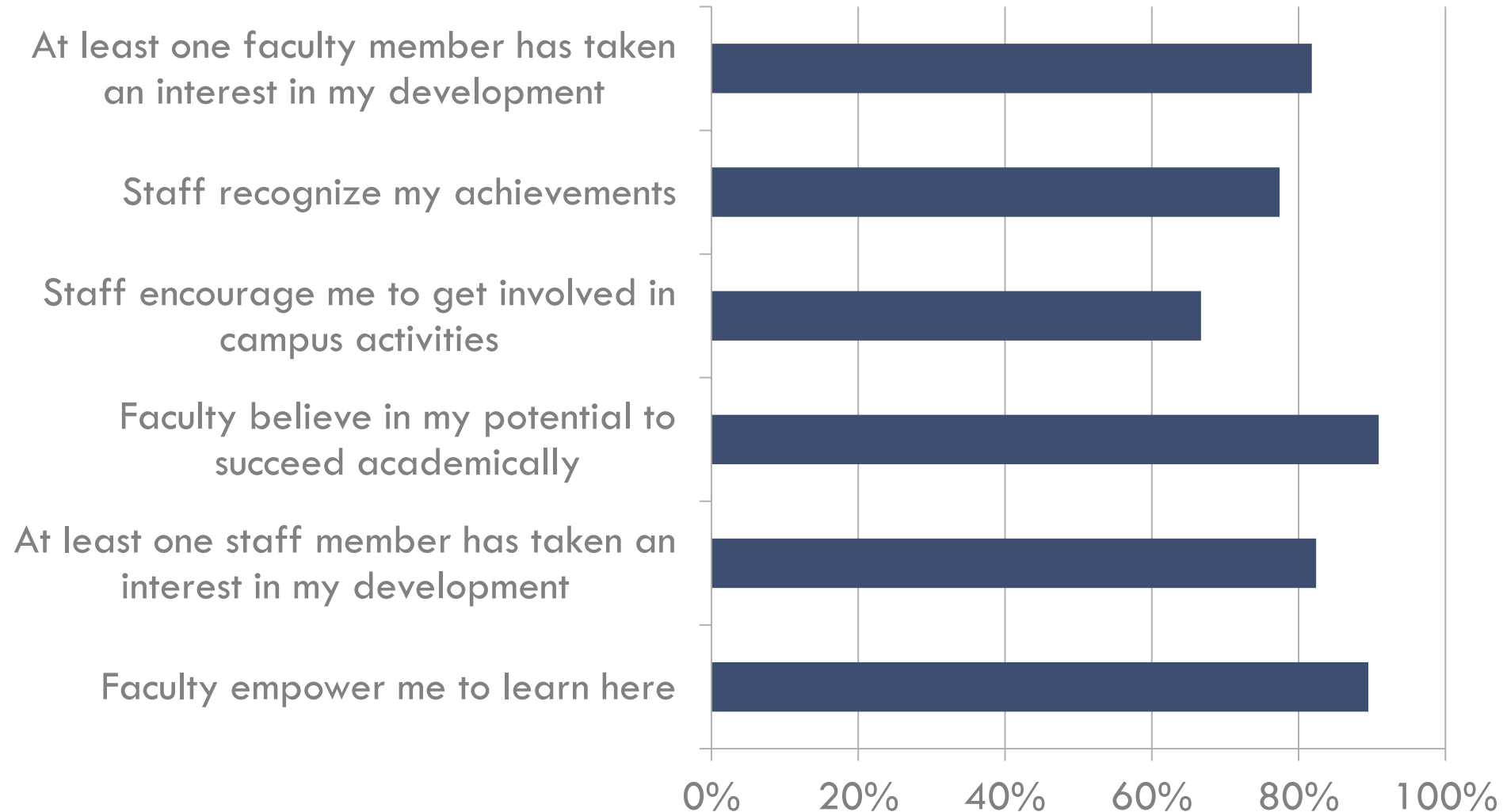| Items	Factor Loadings
Faculty empower me to learn here	.552/.598
At least one staff member has taken an interest in my development	.882/.764
Faculty believe in my potential to succeed academically	.763/.830
Staff encourage me to get involved in campus activities	.509/.564
Staff recognize my achievements	.673/.721
At least one faculty member has taken an interest in my development	.891/.773

Robust ML Model-Fit Results
NFI = .924/.979; CFI = .924/.979; RMSEA = .127/.071

General Interpersonal Validation: Pilot 4-year
Percentage "agree or agree strongly"

Curriculum of Inclusion (α = 0.854)

How many courses have you taken at this institution that included the following?

Items	Factor Loadings
Materials/readings on gender issues	.715
Material/readings on issues of oppression as a system of power and dominance	.775
Serving communities in need (e.g. service learning)	.578
Material/readings on race and ethnicity issues	.824
Opportunities for intensive dialogue between students with different backgrounds and beliefs	.635
Materials/readings on issues of privilege	.705

ML Model-Fit Results
NFI = .987; CFI = .988; RMSEA = .056

Co-Curricular Diversity Activities (Campus-Facilitated) (α= .903)

Since entering this institution have you:

Since entering this institution, how often have you done the following?

Items	Factor Loadings
Attended presentations, performances, and art exhibits on diversity	.637/.649
Attended debates or panels about diversity issues	.797/.810
Participated in ongoing campus-organized discussions on racial/ethnic issues (e.g. intergroup dialogue)	.854/.866
Participated in the Lesbian, Gay, Bisexual, and Transgender Center activities	.762/.729
Participated in the Ethnic or Cultural Center activities	.844/.848
Participated in the Women's/Men's Center activities	.809/.782

Robust ML Model-Fit Results
NFI = .964/.981; CFI = .965/.982; RMSEA = .079/.062

Pluralistic Orientation (α = 0.787)

Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself.

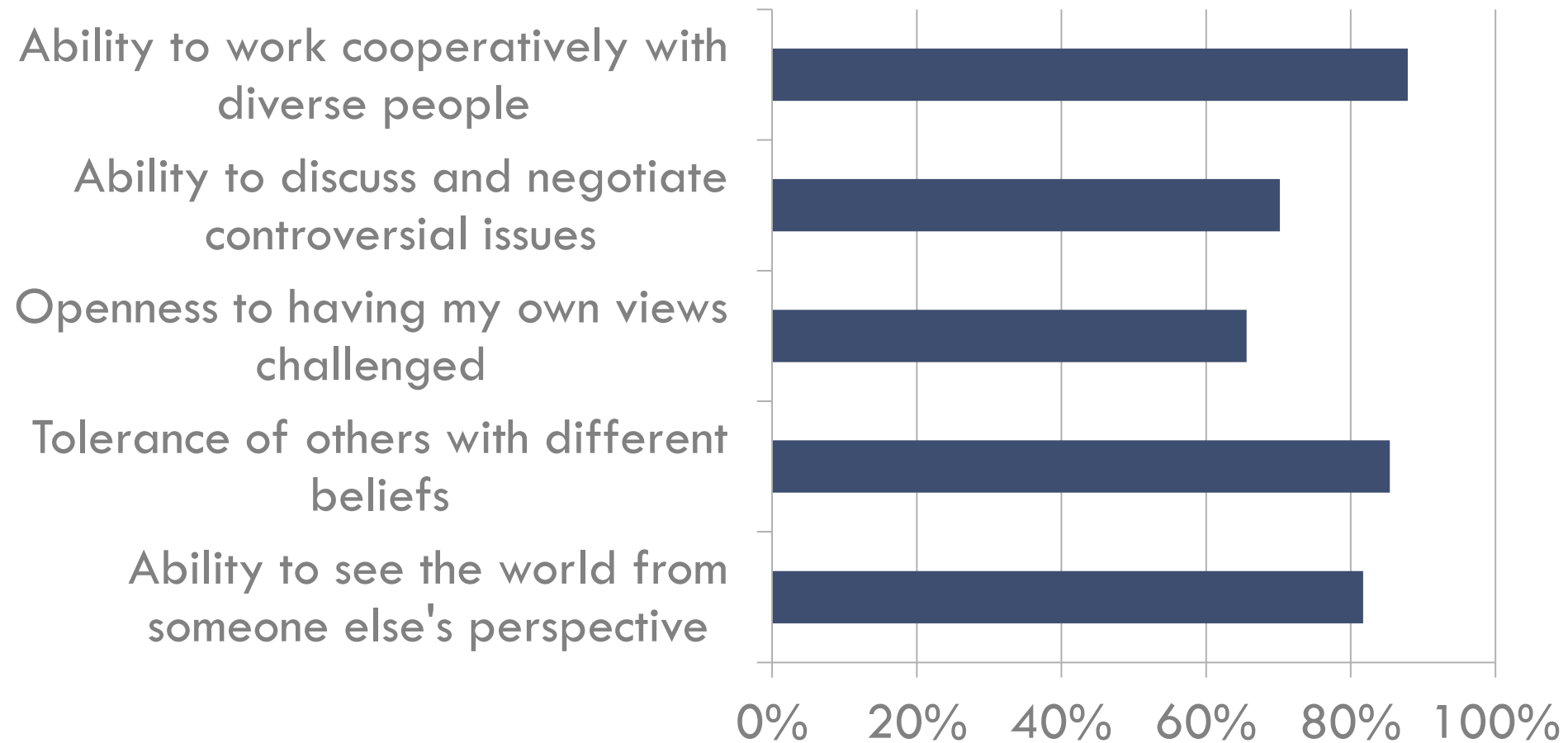| Items	Factor Loadings
Ability to see the world from someone else's perspective	.621/.589
Tolerance of others with different beliefs	.678/.752
Openness to having my own views challenged	.697/.672
Ability to discuss and negotiate controversial issues	.650/.728
Ability to work cooperatively with diverse people	.628/.607

Robust ML Model-Fit Results
NFI = .955/.990; CFI = .954/.991; RMSEA = .103/.052

Pluralistic Orientation Items: Pilot 4-year
Percentage Reporting "Above Average"

Bar chart showing percentages for:
- Ability to work cooperatively with diverse people
- Ability to discuss and negotiate controversial issues
- Openness to having my own views challenged
- Tolerance of others with different beliefs
- Ability to see the world from someone else's perspective

(x-axis: 0%, 20%, 40%, 60%, 80%, 100%)

Ex. What Affects Change in Students' Pluralistic Orientation by the End of 1st year?

Informal

☐ Positive interactions with diverse peers

☐ Taking action on racial issues

☐ Hrs/week working for pay

☐ Hrs/week studying

☐ Hrs/week socializing

Campus facilitated

☐ Leadership training

☐ Diversity co-curricular activities

☐ Diversity courses

☐ Service learning & community service

☐ Course opportunities for intensive dialogue

Civic Action (α = 0.801)

Since entering this institution, how often have you done the following?

Items	Factor Loadings
Engaged in community service	.617/.507
Participated in fund-raising for a charity or campaign	.678/.594
Voted in a national, state, or local election	.527/.510
Discussed politics	.615/.624
Contacted public officials, print or broadcast media (e.g. petitions, letters, etc.)	.726/.718
Participated in a political demonstration (e.g. boycott, rally, protests, etc.)	.681/.640

Robust ML Model-Fit Results
NFI = .743/.981; CFI = .744/.982; RMSEA =.219/.047

Social Action Engagement (α = 0.799)

Indicate how often you have engaged in each of the following at this institution:

Items	Factor Loadings
Made an effort to get to know people from diverse backgrounds	.506/.595
Felt challenged to think more broadly about an issue	.526/.536
Challenged others on issues of discrimination	.643/.580
Recognized the biases that affect my own thinking	.672/.707
Made an effort to educate others about social issues	.743/.680
Challenged my own position on an issue	.708/.739

ML Model-Fit Results
NFI = .965/.992; CFI = .966/.993; RMSEA = .077/.044

Integration of Learning (α = 0.736)

Indicate how often you have engaged in each of the following at this institution:

Items	Factor Loadings
Integrated skills and knowledge from different sources and experiences	.620
Used different points of view to make an argument	.676
Made connections between ideas I learned in different courses	.656
Applied concepts from courses to real life situations	.535

Robust ML Model-Fit Results
NFI = .999; CFI = .999; RMSEA = .024

Method

- DLE Pilot Data n = 4,527 from 14 institutions
- Instrument Coded for Conceptual Themes in Literature
- Exploratory Factor Analysis (EFA) in SPSS
  - Principal Axis Factoring
  - Varimax Rotation
- Confirmatory Factor Analysis (CFA) in EQS
  - With Uncorrelated Errors (Factor Loadings 1st Column)
  - With Correlated Errors (Factor Loadings 2nd Column)