Enacting Inclusivity: Voices from New Majority Undergraduate Researchers

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Background

Who are the New Majority?

- We use the term New Majority to denote students of color, migrant students, first-generation students, parents, commuters, students older than 18 to 24, and low-income students. [1, 2]
- This term is emphatically not meant to imply that members of majorities are more deserving of rights, privileges, or institutional support than minorities. We also do not wish to erase the places and times throughout history when members of the “New” Majority were already a numerical majority. [3]
- Rather, we use this term to acknowledge the oppressive history of higher education systems originally designed to serve middle- and high-income White men, and to contest the centering of these persons in research. [4]

Why study their undergraduate research (UR) experiences?

- Research on UR at minority-serving institutions suggests that it may contribute to higher GPAs, greater self-efficacy, and increased interest in graduate degrees among New Majority students in STEM disciplines. [5, 6]
- Less is known about the UR experiences of New Majority students in Humanities and Social Science disciplines. Conducting qualitative and quantitative analyses of these students’ experiences could help us understand how to make UR programs more inclusive and empowering.

Context

California State University, Monterey Bay (CSUMB)

- CSUMB is a rapidly growing public Hispanic Serving Institution (HSI) currently serving approximately 7,000 students. [7]
- Nearly 70% of CSUMB students identify as people of color and 50% are Hispanic/Latinx students reported marginally higher quality of reflective and self-reported development.

Undergraduate Research Opportunities Center (UROC)

- UROC is a department within CSUMB’s College of Science dedicated to supporting student success and empowerment. In the ten years of its existence, UROC has served approximately 800 students, 63% of whom are members of the New Majority.
- UROC supports students in several ways. Chief among these is (1) coursework that helps students navigate the “hidden curriculum” of academia and pathways to graduate school, and (2) logistical and financial support for students to engage in mentored research opportunities with university faculty.

The Present Study

- In late 2018, a group of UROC-affiliated students contacted UROC staff and offered to share feedback and insights on UROC programs informed by their disciplinary perspectives as Humanities and Social Science majors.
- Insights were shared through a focus group discussion since UROC conducts focus groups annually. Afterwards, the focus group facilitator (Haeger) conducted a participant check to confirm interpretations of student insights.
- In an effort to gain more detailed insights and propose action, members of the research team (Amador, Beasley, Sedlacek, and Haeger) analyzed other sources of student data about UROC programs, including surveys and exit interviews with graduating students.

Research Questions

- What issues do students explicitly or implicitly identify which could be addressed to make UROC and other undergraduate research programs more inclusive, and thus more supportive of student empowerment?
- In particular, what experiences of inclusion or exclusion do students identify in their UROC coursework and mentored research experiences?

Mixed Methods

Focus Group

- Student participants [n=15] initiated the focus group in late 2018.
- The focus group facilitator composed an analytic memo [8] synthesizing three key ideas surfaced in the discussion. She also conducted a participant check [9] to confirm the memo represented the discussion accurately.

Qualitative Findings

Humanities and Social Sciences perspectives should be considered and purposefully, intentionally included in the design of UR programs.

- Student describes their experience as an undergraduate non-stem researcher: “…had to customize this very STEM dominated program to fit what I need. It was intimidating knowing that there was this objective standard that UROC had that I had to be very subjective about.”
- Social justice issues should be discussed in UR programs across all disciplines—not only Humanities and Social Sciences but also STEM/UR programs should purposefully, intentionally take steps to actively support New Majority students.

- A student describes their research experience at an out-of-state university.

  - “…some issue with like racial prejudice and what not in Ohio that I ran into and I just wasn’t prepared for that…”
  - Student describes the barriers they faced by being low income.

Surveys

- Exit surveys are conducted annually with most graduating students who have completed UROC programs.
- Independent samples t-tests were used to compare perceptions of support within UROC programs by various subgroups of New Majority students.

Quantitative Findings

Table 1: Quality of mentoring and learning in research experiences

<table>
<thead>
<tr>
<th>Perception</th>
<th>Reflective Mentoring (n=199)</th>
<th>Instrumental Mentoring (n=199)</th>
<th>Socioemotional Mentoring (n=199)</th>
<th>Professional and Academic Gains</th>
<th>Self-reported development</th>
<th>p-value</th>
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<tbody>
<tr>
<td>Caucasian</td>
<td>3.57</td>
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<td>4.34</td>
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<td>.019</td>
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<td>4.32</td>
<td>4.14</td>
<td>3.96</td>
<td>.10</td>
</tr>
<tr>
<td>Asian American</td>
<td>3.57</td>
<td>4.05</td>
<td>4.32</td>
<td>4.14</td>
<td>3.96</td>
<td>.10</td>
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<tr>
<td>Socioeconomic status</td>
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<td>4.03</td>
<td>4.31</td>
<td>4.15</td>
<td>3.96</td>
<td>.10</td>
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<tr>
<td>Discipline</td>
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<td>4.75</td>
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<td>.01</td>
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<td>.01</td>
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<tr>
<td>Income</td>
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<td>4.75</td>
<td>4.60</td>
<td>4.50</td>
<td>.01</td>
</tr>
</tbody>
</table>

Notes: **p<.01, ***p<.001. The majority of students in the sample is of Hispanic/Latinx ethnicity and 50% are male students. The table reflects results of t-tests for groups with n>10. The table also includes results of one-way ANOVA for groups with n<10. The table also includes results of one-way ANOVA for groups with n<10.

Discussion

- On average, Humanities and Social Science students reported significantly higher professional gains than STEM+ students (p=.030).
- Hispanic/Latinx students reported marginally higher quality of reflective and instrumental mentoring than Caucasian/White students (RM: p=.291 & IM: p=.056).
- Caucasian/White students reported marginally higher quality of socioemotional mentoring than Asian American students (p=.055).
- Female students reported significantly higher research skills gains than male students (p=.029), but male students reported higher rates of socioemotional mentoring than female students though marginally significant (p=.096).
- None of the other comparisons approached statistical significance.

References