Undergraduate research opportunities have been discussed as a high impact practice for student engagement and retention, as well as a promising pipeline to graduate studies. Outcomes produced from undergraduate student engagement in research activities are associated with gains in writing, cognitive, and personal skills, enhanced self-concept, and academic achievement (ASHE Higher Education Report, 2007; Estepp, Velasco, Colbertson, & Conner, 2016). Research experiences allow students to engage in deep learning, helping them learn to link ideas and identify patterns using evidence and logic by examining arguments; ultimately developing their own ideas about a particular problem through reflection (Entwistle, 2006). Research demonstrates that this high impact practice enhances a student’s link to the campus, faculty, and peers, which in turn supports their persistence (Kuh, 2008; Kuh 2013). Yet engaging minority undergraduate students in research activities has been a challenge in higher education. In many instances minority students are post-traditional students with a profile that is far removed from the traditional student that graduates from high school, immediately enters college, is financed by parents, and complete their degree in four years. Post-traditional students now represent over 80% of the student population and many of these are Latinos, veterans, and African Americans (Santiago, 2015; Soares, 2013). Institutions will have to develop variations in research experiences that provide a good fit for this population of students. They should not be discounted simply because they do not fit the profile of the traditional student who participates in research. The National Center for Education Statistics reports that the average Pell Grant recipient is 26 years of age, 25% of students are parents, almost 40% of undergraduate students are enrolled part time, and the National Postsecondary Student Aid Study asserts that 82% of undergraduate students reported that they must work. This presents challenges and opportunities for those interested in integrating undergraduates in research.

### Facts about Minority Post-Traditional Students

- Commuter Students
- Age 18 and older
- Some are parents
- May be married
- Some are immigrants
- Take more than 4 years to complete college
- Are wage earners in their homes
- Seek alternative options for learning – online, weekend, evening, or blended courses
- First generation students
- Are from underrepresented populations
- Choose a college based on cost, location and accessibility

### Literature Review Matrix

| Author/A | Article Title | Journal/IF | Volume, Number, Year | Theoretical Framework 1 | Theoretical Framework 2 | Type of Study | Program | State and Country | Method | Sample Size (total): | Faculty/Supervisor | Academic Counselors/Other | Demographics | Gender | Age Range: | US Citizen | Resident | Undocumented | Student Visa/International | Measures | Data Analyses | Limitations | Results/Findings |
|----------|----------------|------------|----------------------|-------------------------|------------------------|----------------|---------|-------------------|--------|---------------------|-----------------|--------------------------|-------------|--------|-------------|-----------|---------|-------------|------------------------|---------|-----------|-----------|----------------|---|
|          |                |            |                      |                         |                        |               |         |                   |        |                     |                 |                          |             |        |             |           |         |             |                        |        |           |           |                |   |