In 2012, researchers at a state university in the Southwest United States conducted a grounded theory examination of a number of externally funded scholarship and mentorship programs for science, technology, engineering, and mathematics (STEM) undergraduate students enrolled at the university. Data collection methods included observations of mentoring sessions, open-ended surveys, and semi-guided interviews with STEM faculty members. The study produced a series of case studies examining the effects undergraduate mentorship had on participating faculty members. Case studies involving two of the participating faculty members provided direct insight into the impact mentorship had on faculty perceptions of and strategies for working with students from underrepresented populations. These case studies and the implications for future program development will be discussed. (Received September 25, 2012)