

Abstract Submitted  
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**Advice for Running Successful Undergraduate Research Programs - Observations of 50 Years of Methodology at an Undergraduate Institution**<sup>1</sup> LARRY DONALD ISENHOWER, Abilene Christian University —

This year, 2019, marks 50 years of a successful undergraduate research program at Abilene Christian University. This talk is an update of the author's invited talks for the 2015 APS Prize for Outstanding Research at an Undergraduate Institution given at the March and April 2015 APS Meetings. During the past 5 years ACU's undergraduate research program has increased in size and breadth. Likewise, during the past 5-10 years there has been an increased emphasis on research experiences as part of undergraduate education at many schools. What are the most important aspects that maximizes the benefits for both the students and the institution? There are some important distinctions observed that seem to predict success. Emphasis is given to what the faculty members must do and how to make the research experience much better for the student. There are pitfalls that must be avoided, which requires more work by faculty and staff members. The rewards are significant in the development of students, who by their third year are able to function almost independently and can be assigned critical path tasks, increasing the roles an undergraduate can take on, including critical work in large collaborations well beyond ordinary construction tasks.

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