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### Building a Culture of Undergraduate Research: A Case Study

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#### Abstract

Engaging students in research has the potential to benefit students, faculty, and institutions. The authors present a case study documenting strategic efforts to advance a culture of undergraduate research at Hunter College, City University of New York. Assembling a team, removing obstacles, increasing awareness and engagement, identifying goals, and celebrating accomplishments of undergraduate researchers are discussed. Preliminary findings, including increased engagement in an annual undergraduate research conference as well as higher graduation rates and grade-point averages for students who participated in research, suggest that these efforts have supported positive outcomes both for the institution and its undergraduates.

**Keywords:** *culture change, institutionalization, organizational change, student engagement, student outcomes, undergraduate research*

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Over the past 10 years, the benefits of undergraduate research experiences have been well documented in the literature. Students who participate in undergraduate research typically have higher GPAs (Eagan et al. 2013; Osborn and Karustis 2009), are better prepared for graduate study (Hunter, Laursen, and Seymour 2006; Sadler and McKinney 2010), and have a better grasp of the field in both content and context than their peers who do not participate (Crowe and Brakke 2008; Eagan et al. 2011; Osborn and Karukstis 2009; Willis, Krueger, and Kendrick 2013). These experiences also provide newfound technical

skills (Bauer and Bennett 2003; Crowe and Brakke 2008; Hunter et al. 2006; Lopatto 2004, 2010; Osborn and Karukstis 2009; Willis et al. 2013), a deeper appreciation of the research process (Bauer and Bennett 2003; Lopatto 2004; Thiry et al. 2012), stronger communication skills and an enhanced understanding of particular disciplines (Bauer and Bennett 2003; Hunter et al. 2006; Lopatto 2004; Osborn and Karukstis 2009; Sadler and McKinney 2010; Seymour et al. 2004; Zydny et al. 2002). Undergraduate research experiences also increase students' creativity and critical thinking skills (Crowe and Brakke 2008; Lopatto 2004; Osborn and Karukstis 2009), nurture their professional development, foster personal growth, promote their academic success (e.g., Bauer and Bennett 2003; Eagan et al. 2011; Hunter et al. 2006; Lopatto 2010; Osborn and Karukstis 2009; Russell, Hancock, and McCullough 2007; Sadler and McKinney 2010; Seymour et al. 2004), help students build tolerance in the face of obstacles (Lopatto 2004), and effectively learn how to manage their time (Bauer and Bennett 2003). Students who participate in undergraduate research may also experience gains in self-efficacy that help them see a research-based career as a viable career path (Carpi et al. 2016).

The benefits of undergraduate research extend to faculty and institutions as well. Faculty report that engaging undergraduates in their research can lead to advances in their scholarship (Davis and Jacobsen 2014; Osborn and Karukstis 2009; Potter et al. 2009; Zydny et al. 2002) and their teaching (Osborn and Karukstis 2009). Many report feeling pride in witnessing students' development as researchers (Hunter et al. 2006; Seymour et al. 2004), as well as enhanced job satisfaction and quality of life (Eagan et al. 2011; Zydny et al. 2002). Institutional benefits include