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Supporting quality data and decisions for higher education.

# Letter from the Editor

Nuance. It's a simple word that does not adequately seem to reflect the complexity it represents.

In reflecting upon the three articles presented in this volume, it is the first word that came to mind. The work of selecting peers, defining discounting, and discussing expectations all require attention to nuance, and these articles suggest important reasons why this is the case.

As our world becomes ever-more informed by data, there is an ability to better understand the complexity of issues, yet at the same time there exists a belief that more data will make issues easier to understand and explain in simple formats.

The Obama Administration's focus on college scorecards, rankings, and shopping sheets to guide the college selection process—and the metrics that comprise these efforts—serve as examples of a perception of simplicity. Yet as D'Allegro and Zhou point out, selecting peers at the institutional level requires complex analysis. One would think that students' selection processes would consist of more exploration than simply clicking on a criteria or two as well. This assumes, of course, that the data elements have common definitions and are operationalized the same way. However, that assumption is not accurate, as highlighted by Davis and Redd and by Seifert, Wells, Saunders, and Gopaul.

I am reminded that appropriate use of data requires an appreciation for nuance. I believe that after reading the fine work presented in these three papers you will regain your appreciation for it as well.

Sincerely,



Christopher M. Mullin



## IN THIS ISSUE...

### Article 132

Page 1

Author: *Mary Lou D'Allegro and Kai Zhou*

A Case Study to Examine Peer Grouping and Aspirant Selection

### Article 133

Page 17

Author: *Natalie Pullaro Davis and Kenneth E. Redd*

Tracking the Discount  
Tuition Discount Rates, Net Tuition Revenue, and Efforts to Inform Institutional Practices

### Article 134

Page 33

Author: *Tricia A. Seifert, Ryan S. Wells, Daniel B. Saunders, Bryan Gopaul*

Unrealized Educational Expectations  
A Growing or Diminishing Gender Gap? It Depends on Your Definition

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## UNREALIZED EDUCATIONAL EXPECTATIONS A Growing or Diminishing Gender Gap? It Depends on Your Definition

*Tricia A. Seifert, Ryan S. Wells,  
Daniel B. Saunders, Bryan  
Gopaul*

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### Abstract

Past research has examined the widening gender gaps in college expectations and enrollment in the United States in which more women than men

expect to continue their education and enroll in postsecondary institutions. A discrepancy exists between students' expectations and their enrollment behavior: more students expect to attend college than actually enroll. This discrepancy—effectively students' unrealized expectations and the commensurate gender gap—has recently gained the attention of the educational research community, but with inconsistent results. This inconclusiveness may be due in part to different operational definitions, assumptions, and/or methods researchers have used in analyzing this phenomenon. Using 35 years of nationally representative data from American high school graduates and two operational definitions for unrealized expectations, we explore how the gender gap has changed over time by race and socioeconomic status. We find the two operational definitions of unrealized expectations yield results that differ in direction and magnitude. These findings demonstrate that operational definitions of fundamental constructs can change the results and conclusions and recommendations made, particularly as these relate to educational expectation formation and realization. The paper concludes by asserting the value of using multiple operational definitions to best represent the complexity of educational phenomena.

### INTRODUCTION

In the past three decades, women first drew even with men and then surpassed them in terms of educational expectations, application, enrollment, time to degree, and degree completion, effectively reversing the historic gender gaps that were a result of greater opportunities for men than for women (Buchmann & Dalton, 2002; Buchmann & DiPrete, 2006; King, 2010; National Center for Education Statistics [NCES], 2005; J. Reynolds & Burge, 2008; J. Reynolds & Johnson, 2011; Turley, Santos, & Ceja, 2007). Although much scholarly emphasis has been placed on educational expectations and postsecondary enrollment, a persistent discrepancy exists between these two factors: more students expect to attend than actually enroll (Buchmann & Park, 2009; Hanson, 1994; Hauser & Anderson, 1991; Schneider & Stevenson, 1999). For postsecondary institutional researchers, strategic planners and enrollment managers, this discrepancy has implications for developing effective bridge and transition programs with feeder high schools.

The discrepancy between students' expectations and subsequent enrollment behavior—effectively, students' unrealized educational expectations—may differ by gender as well as by other individual characteristics. Past research

is inconsistent, suggesting that men may be more likely than women to fail to realize their educational expectations (Hanson, 1994) or that women may be more likely than men to have unrealized expectations (J. Reynolds & Johnson, 2011). Because the increase in postsecondary expectations has been the greatest among historically underrepresented groups (Goyette, 2008; J. Reynolds & Burge, 2008; Rosenbaum, 2001; Schneider & Stevenson 1999), it stands to reason that racial minority students and students with lower socioeconomic status (SES) may be more likely than White students or students of higher SES to have unrealized educational expectations (Hauser & Anderson, 1991; MacLeod, 1995; J. Reynolds & Johnson, 2011) and that these differences may be further nuanced by gender. Together, this body of research suggests that social origin characteristics are likely associated with unrealized expectations, potentially leading to inequitable levels of educational attainment.

Mixed results concerning whether men or women are more likely to realize their postsecondary expectations may be due in part to researchers using different operational definitions, assumptions, and/or methods in analyzing this phenomenon. While a variety of definitions and methods can be useful in understanding complex phenomena, any individual study can easily overstate its claims due to the subjective decisions made by the researcher (Wells, Lynch, & Seifert, 2011). For example, what is meant by “realizing” one’s educational expectations? How is realization measured? To what extent might the way one operationalizes “realized expectations” lead to different strategic policy decisions at the institutional level? The purpose of this paper is to explore how operational definitions of fundamental constructs can change the results and the conclusions and/or recommendations made. We examine

the gender gap in unrealized expectations over time and how this gap has varied by students’ race and SES to exemplify the importance of operationally defining constructs. Using 35 years of nationally representative data from American high school graduates we employed two different operational definitions for unrealized expectations: (1) expecting a 4-year degree and failing to enroll in a 4-year institution within 2 years of high school graduation, and (2) expecting any postsecondary education and failing to enroll in any postsecondary institution within 2 years of high school graduation. This analysis examines the following research questions: To what extent do research findings regarding the gender gap in unrealized expectations differ based on the operational definition used? Have these differences changed over time? The null hypothesis holds that the findings from the two operational definitions will differ only by chance variation.

Although the normative assumption in the United States is that “going to college” means attending a 4-year institution (Goyette, 2008; Rosenbaum, 2001), using two definitions allows institutional researchers and policymakers to understand the discrepancy in students’ realization of their educational goals more inclusively, which can then better inform institutional strategic planning efforts. Two operational definitions (and two sets of results and related conclusions) also allow us to highlight the importance for researchers to be transparent in articulating their decisions and assumptions as these may influence the findings from any set of analyses and the commensurate recommendations.

In addition to our implications for operationally defining concepts, our example also generates new knowledge that is important for four reasons. First, to understand the present the

research community must fully understand the past; this additional information will add nuance and complexity to our comprehension of historical trends in educational gender gaps. Second, institutional researchers, practitioners, and policymakers tend to assume steady reversals of the gender gaps over time. These gaps may take on more relevance, however, depending on how the unrealized expectation gender gap has changed over time and if these changes differ in direction or magnitude depending on how unrealized expectations have been defined. If women have been less likely to realize their expectations, then their gains in enrollment have been despite this fact. If women have been more likely to realize their expectations, then this may be a partial explanation of their enrollment gains. Third, if one gender has been less likely to realize expectations, especially if this has been consistent over time and irrespective of how unrealized expectations are defined, programs and policies (often designed in concert with high schools) to encourage postsecondary enrollment may need to consider the emphasis placed on expectation formation versus expectation realization. This has a clear impact on institutional strategic planning and enrollment management efforts. Fourth, all of these processes are complicated by race/ethnicity and SES. Understanding these factors in relationship to the unrealized expectations gender gaps over time and the extent to which the gaps differ in direction and magnitude based on one’s definition of unrealized expectations may shed light on whether failing to realize expectations has been a reason for the even larger gender gaps experienced by students of color and students from lower SES backgrounds.

## LITERATURE REVIEW

A body of literature has examined the gender gap in educational outcomes (see Buchmann & Dalton, 2002;

Buchmann & DiPrete, 2006; Buchmann, DiPrete, & McDaniel, 2008; DiPrete & Buchmann, 2006; Jacobs, 1996; King, 2000, 2006, 2010; J. Reynolds & Burge, 2002, 2008; Turley et al., 2007; Wells, Seifert, Padgett, Park, & Umbach, 2011; Wells, Seifert, & Saunders, 2013). These gaps are often differentially experienced by racial minority students and students from lower SES backgrounds compared to their White or higher-SES peers (Chang, Chen, Greenberger, Dooley, & Heckhausen, 2006; King, 2010; NCES, 2005; Turley et al., 2007). With the study's context set, we focus the present literature review on the methodological choices that researchers have made when examining constructs associated with unrealized educational expectations. We found researchers have defined the constructs differently both in terms of substantive definition and in terms of operationalized measurement. We discuss each of these differences in turn. Taken together, such definitional variety has implications for individual study results and interpretation. Such implications are compounded when one seeks to ascertain the weight of the research evidence within a body of literature in an effort to inform policy and practice.

### Variations in Definition

The literature on educational expectations is complicated by the fact that there has been a debate about whether students were drawing on their idealistic "aspirations" or more realistic "expectations" in formulating a response to survey questions. Haller and colleagues (Haller & Butterworth, 1960; Haller, Otto, Meier, & Ohlendorf, 1974; Haller & Portes, 1973; Woelfel & Haller, 1971), in work that examined explicitly the social-psychological variables associated with status attainment research, tended to use goal-directed aspirations as opposed to the more concrete students' expected plans. More-recent studies and those that have used secondary data from NCES

(Alexander, Bozick, & Entwisle, 2008; Feliciano, 2006; Frost, 2007) have used a more realistic account of students' educational expectations. J. Reynolds and Johnson (2011) used the term "educational ambitions" to refer to the postsecondary credentials that high school students expect to attain after high school graduation, although they note these ambitions are not necessarily synonymous with expectations. Wells et al. (2011) conducted a review of the literature in predominant journals in educational research, higher education, and sociology of education since 1980, and presented the varied use of the definitions of the terms "educational aspirations" and "expectations." They noted that those two terms are often used interchangeably and can lead to misinterpretations if the reader is not cautious in connecting the construct under examination with its specific definition. With regard to the construct of particular interest, the present study examines unrealized educational expectations, whereas past research has investigated this same construct from its more positive pole—that is, realized or fulfilled expectations (J. Reynolds & Johnson, 2011; Wells et al., 2013).

### Measuring Expectations, Realized and Unrealized

Wells et al. (2011) noted three main ways that scholars, using quantitative methods, have operationalized educational expectations. First, they may ask students the number of years of education they expect to obtain, creating a continuous variable. Second, they may create a series of categories that correspond with common educational credentials—for example, obtaining a bachelor's degree. Third, they may use a series of questions about the likelihood of obtaining different educational thresholds in an effort to measure subjective probability distributions, or they may have students graph their expectations. These alternative methods of measuring expectations have often

been in response to critiques levying that the "identification of decision processes from choice data must rest on strong maintained assumptions" (Manski, 2004, p. 1330); these alternative methods are often difficult to defend. Recognizing the tenuousness of students' expectations, Jacob and Wilder (2010) examined how students update their expectations based on new information they receive about their academic ability.

The different ways that researchers operationalize educational expectations can yield different results. Wells et al. (2011) operationalized educational expectations in a variety of ways (less-than-4-year degree, 4-year degree, graduate degree) and analyzed the data using ordinary least squares (OLS), binomial logistic, multinomial logistic, partial proportional odds, and sequential logit models. How educational expectations were operationally defined and the methods of analyses employed made a difference in the results, both in terms of magnitude of the predictors' coefficients and in the extent to which effects were identified as statistically significant. They asserted that researchers need to be aware of their methodological choices because these decisions may contribute to subtle yet important differences in research results and conclusions. Recognizing the importance of model dependence in statistical analysis, Wells et al. (2011) called on readers to use care when describing the "body of evidence" because results are not independent from the models employed to obtain them, in the same way that results are not independent from the context from which the data were collected.

While model specification and methods of statistical analysis are clearly important, the present paper focuses on how even broader, and often unexamined, assumptions concerning key concepts may affect a study's results and

conclusions. We demonstrate this by examining the gender gap in unrealized expectations over 35 years using two conceptualizations of expecting postsecondary education: attainment of a bachelor's degree or higher, or attainment of any level of postsecondary education. Recognizing cultural conditions may influence women's and men's expectations for postsecondary education, we further nuance the gender gap analysis by race/ethnicity and SES. We assert that examining two thresholds of unrealized educational expectations in terms of how the gender gap has changed over time for students of different racial/ethnic groups and different levels of SES provides greater nuance for policy and practice considerations and emphasizes the importance of couching one's conclusions and recommendations in a clear explanation of the definitions and assumptions that underpin the research.

## METHODS

### Data

In order to demonstrate the potentially misleading differences that can result from how key concepts are defined, we examined how the unrealized expectations gender gap has changed over time and across racial/ethnic group and SES. We analyzed four datasets that spanned 35 years, collected by the U.S. Department of Education's (ED's) National Center for Education Statistics (NCES): (1) the National Longitudinal Study (NLS) (ED, 1972, 1974); (2) High School & Beyond (HS&B) (ED, 1980, 1982); (3) the National Educational Longitudinal Study (NELS) (ED, 1992, 1994); and (4) the Educational Longitudinal Study (ELS) (ED, 2004, 2006). These datasets were chosen because they used a nationally representative sampling strategy in estimating cohort

characteristics of American students in Grade 12 and then 2 years after high school. Similar questions pertaining to educational expectations were asked at each data collection across the four cohorts examined, making them ideal for addressing our research questions. We provide the items used to create our variables in Table 1. For each dataset, we computed two original variables: (1) the unrealized expectations of enrolling in a 4-year institution; and (2) the unrealized expectations of enrolling in any postsecondary institution 2 years after high school. Each of these may be justifiably defined as not realizing one's postsecondary expectations.

The first dependent variable represented unrealized expectations if the student in Grade 12 expected to earn at least a bachelor's degree but did not enroll in a 4-year institution within 2 years after high school graduation. This is the most salient outcome given the normative assumption that "going to college" or continuing to postsecondary education in the American context means working toward a 4-year degree (Goyette, 2008; Rosenbaum, 2001). Because this assumption may have changed over time, however, and because of the multitude of non-4-year postsecondary options, we created a second dependent variable that represented unrealized expectations if the student in Grade 12 expected to pursue any postsecondary education but did not enroll in a postsecondary institution within 2 years after high school graduation.

### Analyses

This descriptive example presents a comprehensive historical look at the unrealized expectations gender gaps over time, by race and SES, for high school graduates.<sup>1</sup> For each outcome

and within each dataset, we first examined the educational expectations of Grade 12 students who graduated high school. Next we investigated the enrollment behavior 2 years after high school for Grade 12 students who had indicated they had (a) expectations for at least a 4-year degree or (b) expectations for some level of postsecondary education but less than a bachelor's degree. We then computed the percentage of students who failed to realize their expectations for each male and female subsample. Using these values, we computed the unrealized expectations gender gap by subtracting the percentage of women who failed to realize their expectations from the percentage of men who failed to realize their expectations. Within each unrealized expectations gender gap measure we examined how the gap differed by race and SES quintile (calculated by NCES using parents' education, family income, and parents' occupation). By computing the unrealized expectations gender gap in this way (see Figures 1–6), negative percentages indicate situations in which men failed to realize their expectations at a rate lower than women failed to realize theirs (i.e., men's advantage). Conversely, positive percentages indicate situations in which men failed to realize their expectations at a rate greater than women failed to realize theirs (i.e., women's advantage).

### Limitations

We acknowledge unrealized expectations could be operationalized in a number of ways. As the focus of the present analysis was on the impact of operational definitions on results and recommendations within the context of gender gaps in unrealized expectations, it was important to have parallel questions across the four cohorts.

<sup>1</sup> It is important to recognize that our findings are based strictly on students who earned their high school diploma. Among the population the sample for these analyses are drawn from, fewer men than women earn a high school diploma (ED, 2007).

Dataset	Expectations	Enrollment 2 Years after High School
NLS	<p>To answer this question, circle one number for the highest level of education you would like to attain, and also circle one for the highest level you plan to attain.</p> <p>Response options:</p> <ol style="list-style-type: none"> <li>1. Less than high school graduation</li> <li>2. Graduate from high school but not go beyond that</li> <li>3. Graduate from high school and then go to a vocational, technical, business, or trade school</li> <li>4. Go to a junior college</li> <li>5. Go to a four-year college or university</li> <li>6. Go to a graduate or professional school after college</li> </ol>	<p>(The following questions were asked twice and then combined to operationalize behavior after high school.)</p> <p>What is the exact name and location of the current or most recent school you attended since October 1, 1979?</p> <p>What kind of school is this?</p> <ol style="list-style-type: none"> <li>1. Vocational, trade, business or other career training school</li> <li>2. Junior or community college (two-year)</li> <li>3. Four-year college or university</li> <li>4. Other (please describe: ____)</li> </ol> <p>When did you attend this school? (CIRCLE THE FIRST AND LAST MONTHS FOR EACH TIME PERIOD AT THIS SCHOOL. DRAW A LINE BETWEEN THE CIRCLED DATES.)</p>
HS&B	<p>As things stand now, how far in school do you think you will get?</p> <p>Response options:</p> <ol style="list-style-type: none"> <li>1. Less than high school graduation</li> <li>2. High school graduation only</li> <li>3. Less than two years of school</li> <li>4. Two years or more of school</li> <li>5. A degree from a vocational, trade, or business school</li> <li>6. Less than two years of college</li> <li>7. Two years or more of college (including two-year degree)</li> <li>8. Finish college (four- or five-year degree)</li> <li>9. Master's degree or equivalent</li> <li>10. PhD, MD, other</li> <li>11. Don't know</li> </ol>	<p>Next we would like information about all of the schools you have gone to since you left high school. Please start with the first school you went to after high school. (BE SURE TO INCLUDE YOUR CURRENT SCHOOL.) If you attended two schools at the same time, please put them in separate columns.</p> <p>(Respondents were then prompted to answer the following question for each school named.)</p> <p>What kind of school is this?</p> <ol style="list-style-type: none"> <li>1. Vocational, trade, business or other career training school</li> <li>2. Junior or community college (two-year)</li> <li>3. Four-year college or university</li> <li>4. Other (please describe: ____)</li> </ol>
NELS	<p>As things stand now, how far in school do you think you will get?</p> <p>Response options:</p> <ol style="list-style-type: none"> <li>1. Less than high school graduation</li> <li>2. High school graduation only</li> <li>3. Less than two years of school</li> <li>4. Two years or more of school</li> <li>5. A degree from a vocational, trade, or business school</li> <li>6. Less than two years of college</li> <li>7. Two years or more of college (including two-year degree)</li> <li>8. Finish college (four- or five-year degree)</li> <li>9. Master's degree or equivalent</li> <li>10. PhD, MD, other</li> <li>11. Don't know</li> </ol>	<p>(For up to five colleges and universities possibly attended after high-school through 1994, respondents were asked: Write the name and location of the university, college, or school attended.</p> <p>(Respondents were then prompted to answer the following question for each school named.)</p> <p>What type of institution is (was) this?</p> <ol style="list-style-type: none"> <li>1. Public, 4-year or above?</li> <li>2. Private nonprofit, 4-year or above?</li> <li>3. Private for-profit, 4-year or above?</li> <li>4. Public, 2-year?</li> <li>5. Private nonprofit, 2-year?</li> <li>6. Private for-profit, 2-year?</li> <li>7. Public, less than 2-year?</li> <li>8. Private nonprofit, less than 2-year?</li> <li>9. Private for-profit, less than 2-year?</li> </ol>
ELS	<p>As things stand now, how far in school do you think you will get? (MARK ONE RESPONSE)</p> <p>Response options:</p> <ol style="list-style-type: none"> <li>1. Less than high school graduation</li> <li>2. GED or other equivalency only</li> <li>3. High school graduation only</li> <li>4. Attend or complete a 1- or 2-year program in a community college or vocational school</li> <li>5. Attend college, but not complete a 4- or 5-year degree</li> <li>6. Graduate from college (4- or 5-year degree)</li> <li>7. Obtain a Master's degree or equivalent</li> <li>8. Obtain a Ph.D., M.D., or other advanced degree</li> <li>9. Don't know</li> </ol>	<p>Now, we want to know about any schools you may have attended since high school, even ones you have not already named. Since you received your high school diploma, have you attended a college, university, vocational-technical or trade school where you took courses for credit? (Please include all schools, even if you have not completed a course.)</p> <p>(Respondents were then prompted to answer the following question for each school named.)</p> <p>Is this school a . . .</p> <ol style="list-style-type: none"> <li>1. Four-year college or university</li> <li>2. Two-year community college</li> <li>3. Vocational, technical or trade school</li> </ol>

At the time of the analysis, degree completion data were not available from the ELS cohort. Thus, we examined unrealized expectations 2 years after high school. We recognize the limitation of looking at enrollment behavior only 2 years beyond high school; students may realize their expectations but may do so after this 2-year window. Research in the United States has found that students who delay entry have a much lower chance of completing a degree (Bozick & DeLuca, 2005) and completion rates continue to drop the longer students delay (Rowan-Kenyon, 2007; Turner, 2004). Therefore, we operationalized a delay in enrollment beyond 2 years after high school completion as unrealized expectations.

Failing to enroll at a 4-year institution is not necessarily misaligned with 4-year degree expectations, given the transfer function of 2-year institutions in the American context (Dougherty, 1994/2001). Past research (Adelman, 1999; C. Reynolds & DesJardins, 2009), however, has shown that students who expect to earn a bachelor's degree but begin at a 2-year institution and transfer to a 4-year institution are less likely to complete a 4-year degree than their peers who enroll in a 4-year institution at the start of their postsecondary career. We defined "unrealized expectations" as expecting a 4-year degree but initially attending a 2-year institution. Though alternative conceptualizations may be equally legitimate, this operational definition is supported by notions that community colleges may "cool out" students' expectations for a bachelor's degree (Brint & Karabel, 1989; Clark, 1960).

One could also consider those students who did not expect to attain any level of postsecondary education but who enrolled in a postsecondary institution as an over-realization of sorts, characterized by warming up expectations to enrollment (Alexander et al.,

2008). Moreover, one could examine how students modify their educational expectations over time (see Alexander et al., 2008; Jacob & Wilder, 2010; Uno, Mortimer, Kim, & Vuolo, 2010). In this regard, we could have examined the variation of educational expectations beginning in Grade 8, following up again with responses in Grades 10 and 12, and then again, finally, 2 years after high school. This is a worthwhile line of investigation, but as with any line of longitudinal inquiry, it may be limited due to sample attrition.

Finally, our analysis examines unrealized expectations only insofar as students fail to enroll in a postsecondary institution consistent with their earlier identified educational expectations. It is important to note, however, that enrollment is a necessary but not sufficient condition to realize one's expectations fully. Students must also persist through to completion of their specified educational level in order to truly realize their expectations. Recent research has consistently shown women to outpace men in degree attainment (Buchmann & DiPrete, 2006; Charles & Luoh, 2003; DiPrete & Buchmann, 2006; Peter & Horn, 2005). Thus, any gender gaps in unrealized expectations identified in this study likely underestimate the magnitude if one were to examine realized expectations through to degree completion.

These delimitations allowed us to focus on the unique phenomena of unrealized expectations for a 4-year degree and some postsecondary education within 2 years of high school graduation. We acknowledge the limitations inherent in our operationalizations and assumptions. Future research should further the understanding of how operational definitions and assumptions influence results by examining different conceptions of unrealized expectations. All of our results and subsequent

conclusions depend on these definitions and assumptions.

## RESULTS

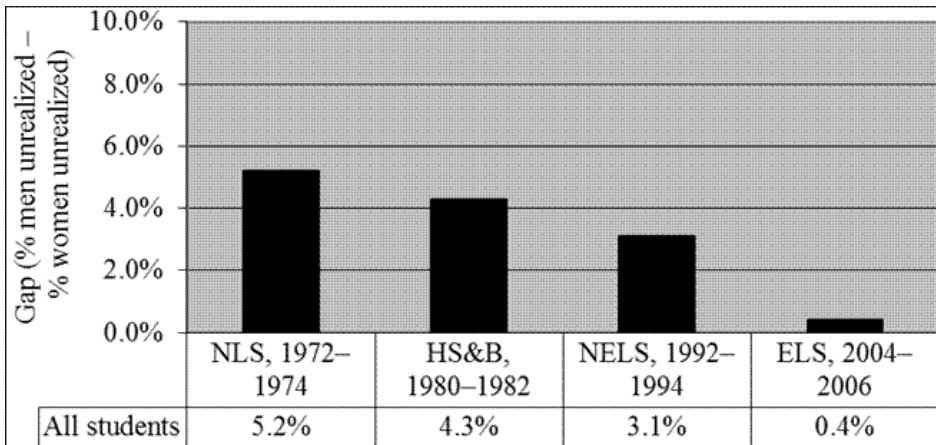
### Four-year degree unrealized expectations gender gap

Consistent with past American research (Goyette, 2008; Schneider & Stevenson, 1999), both men and women have increased their educational expectations of attaining a bachelor's degree over the past 35 years. Women's expectations for a bachelor's degree outpaced men's expectations, however, increasing from 40% in 1972 to 75% in 2004 (an increase of 35 percentage points) while men's expectations for a 4-year degree over that same period increased by 17 percentage points, from 49% in 1972 to 66% in 2004. During this time, women's enrollment also increased at a faster rate than men's: women's 4-year enrollment increased from 31% to 53% while men's increased from approximately 34% to 47%.

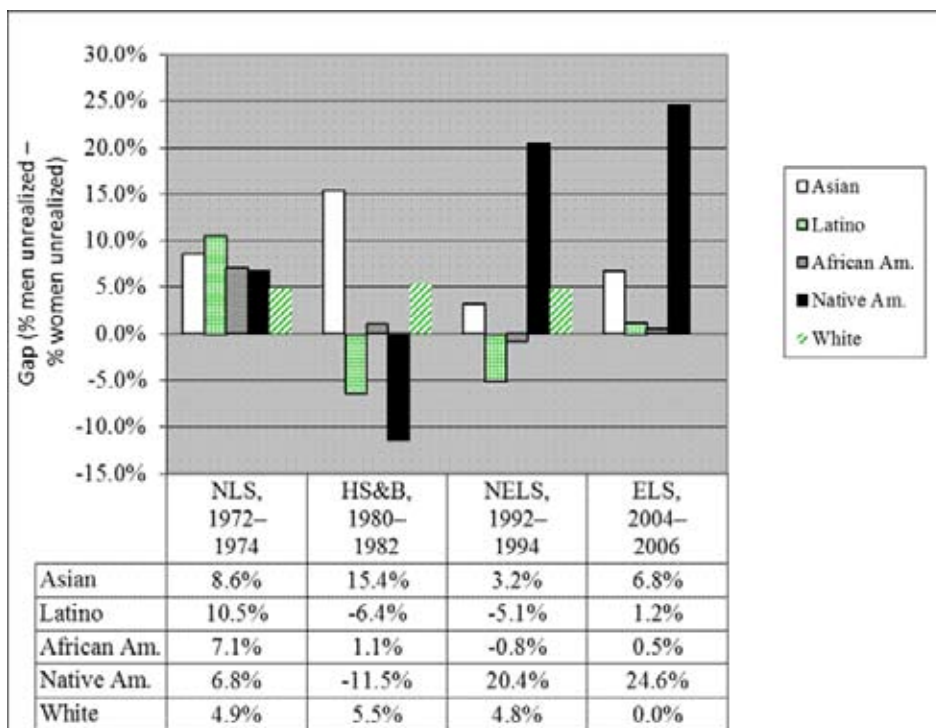
We drew from students' expectations and enrollment behavior to calculate the percentage of men and women from each cohort who had unrealized expectations according to the 4-year degree expectation operational definition. We then calculated the gap between these levels of unrealized expectations (e.g., percentage of men with unrealized expectations – percentage of women with unrealized expectations). Figure 1 shows a decreasing unrealized expectations gender gap for enrolling in a 4-year institution 2 years after high school. The fact that the gap is charted above 0% indicates that men have failed to realize their expectations at a rate greater than women—indicating a female advantage—since 1974. The percentage of men who failed to realize their expectations relative to women who failed to realize their expectations was larger in 1974 (5.2%) than in 2006 (0.4%). In 2006 the per-



**Figure 1. Four-Year Degree Unrealized Expectations Gender Gap**



**Figure 2. Four-Year Degree Unrealized Expectations Gender Gap by Race/Ethnicity**



centage of men and women who failed to realize their expectations by enrolling in a 4-year institution was approximately the same at 34%. Examining the unrealized expectation gap solely as a function of gender, however, assumes men and women experience educational expectation development, enrollment opportunities, and barriers in the same way. Yet, past research (Chang et al., 2006; Hanson, 1994) suggests men

and women of different racial groups and levels of SES face different social realities. Next we explore the 4-year unrealized expectations gender gap differences by race and SES.

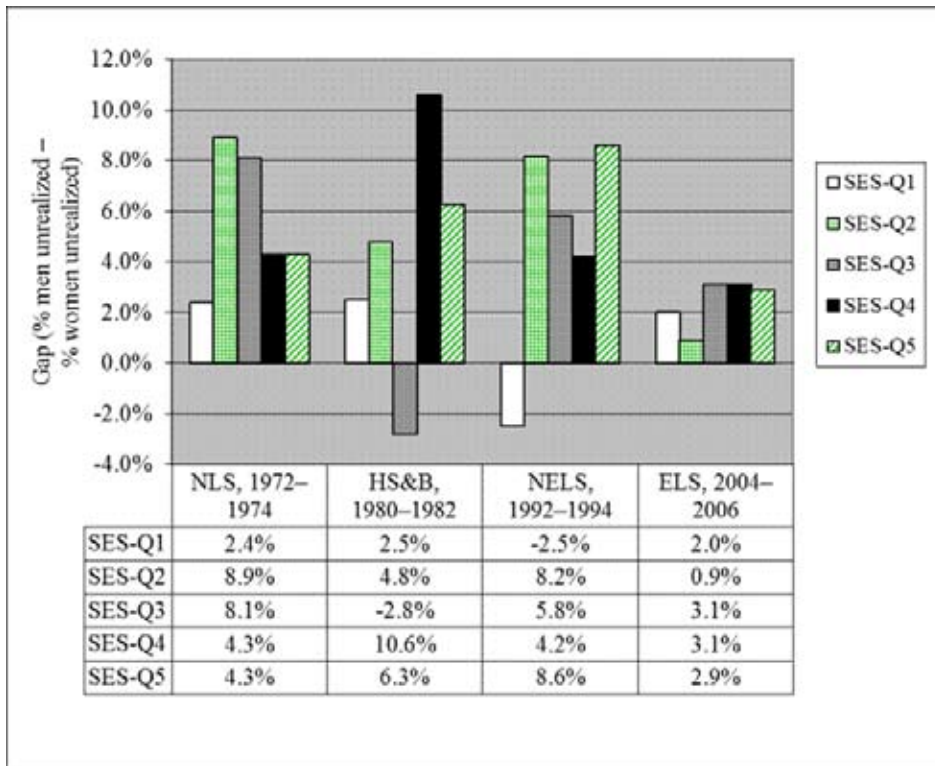
*Four-year degree unrealized expectations gender gap by race/ethnicity*  
Figure 2 shows the variability of the unrealized expectations gender gap for

enrolling in a 4-year institution 2 years after high school by racial group over time. The figure clearly depicts that women in the 1970s cohort irrespective of racial group were more likely to realize their expectations than men, thus the unrealized expectations gender gap ranged from 4.9% (for Whites) to 10.5% (for Latinos). By the 1980s and 1990s the unrealized expectations gender gap differed considerably across racial groups. For Latinos, the unrealized expectations gender gap reversed in the 1980s cohort, with women failing to realize their expectations at a rate greater than did their male peers. The unrealized expectations gender gap reversed also for Native Americans during this period but reversed again in the 1990s, with Native American men failing to realize their expectations at a rate greater than Native American women—a trend that has continued into the recent decade. Compared to African Americans and Whites, who have generally experienced a decrease in the unrealized expectations gender gap for enrolling in a 4-year institution, the unrealized expectations gender gap for Asians has favored women consistently, with men failing to realize their expectations at a rate greater than have women.

*Four-year degree unrealized expectations gender gap by SES*

Although the unrealized expectations gender gap has not fluctuated as widely among students from different SES quintiles as it has among students of different racial/ethnic groups, the variability is still noteworthy. Figure 3 shows the unrealized expectations gender gap relative to expecting a 4-year degree and enrolling in a 4-year institution 2 years after high school by SES. With two exceptions, men of all levels of SES have failed to realize their expectations at a rate greater than their female peers. This has resulted in an unrealized expectations gender gap that has persisted irrespective of SES

**Figure 3. Four-Year Degree Unrealized Expectations Gender Gap by SES**



for 35 years. Except among the 1990s cohort, the unrealized expectations gender gap has remained the same for the lowest SES quintile since the 1970s at 2%. Historically, the lowest SES quintile has had the smallest unrealized expectations gender gap for expecting a 4-year degree and enrolling in a 4-year institution within 2 years post high school. The unrealized expectations gender gap has decreased for all other SES quintiles since the 1970s with the largest decrease occurring among the poor working class (SES-Q2).

### Any postsecondary education unrealized expectations gender gap

Similar to their expectations for bachelor's degrees, both men and women have increased their educational expectations of attaining any level of postsecondary education over the past 35 years. Again, women's expectations outpaced men's expectations, increasing from 75% in 1972 to 90% in

2004 (a 15 percentage point increase) while men's expectations for any level of postsecondary education over that same period increased by 5 percentage points. As we already know, during this time women's enrollment also outpaced men's, increasing from 67% to 83% while men's increased from approximately 70% to 75%.

We drew from students' expectations and enrollment behavior to calculate the percentage of men and women from each cohort who had unrealized expectations in enrolling in any postsecondary institution. We then calculated the gap between these levels of unrealized expectations (e.g., percentage of men with unrealized expectations – percentage of women with unrealized expectations). Figure 4 shows an increasing unrealized expectations gender gap—indicating a female advantage—for enrolling in any postsecondary institution 2 years after high school. Although some level

of gender gap has existed since the 1970s (1.4%), this gap has increased to 5.4% among the most recent cohort. This suggests that since the 1970s, among high school graduates, men have failed to realize their expectations of pursuing any postsecondary education at a greater rate than have women. This trend has persisted and steadily increased through the 2006 cohort.

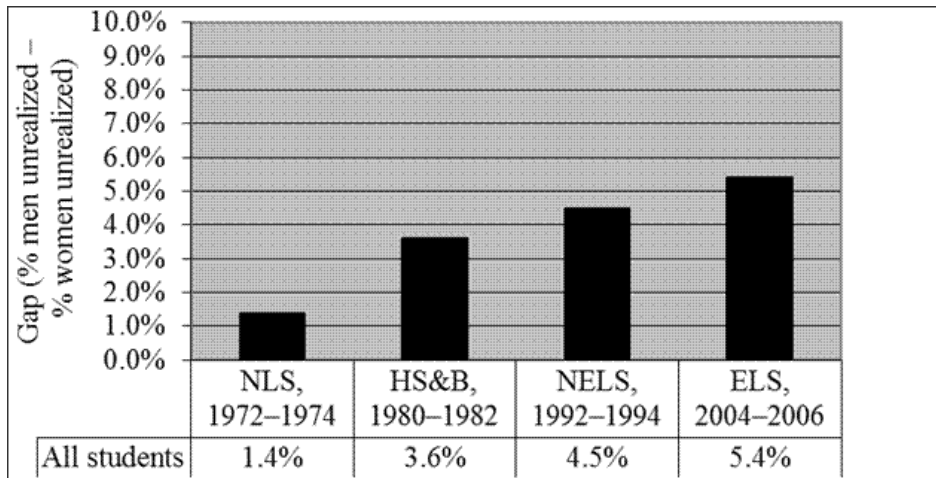
### Any postsecondary education unrealized expectations gender gap by race/ethnicity

Figure 5 shows the variability of the unrealized expectations gender gap relative to expecting any level of postsecondary education and enrolling in a postsecondary institution 2 years after high school by racial group over time. With the exception of Asian and Native American students from the two earliest cohorts, the trend in the unrealized expectations gender gap for any postsecondary enrollment by race was clear: men consistently have failed to realize their educational expectations for any postsecondary education at a rate greater than women. Moreover, the unrealized expectations gender gap for any postsecondary education has increased for nearly every racial group since the 1990s.

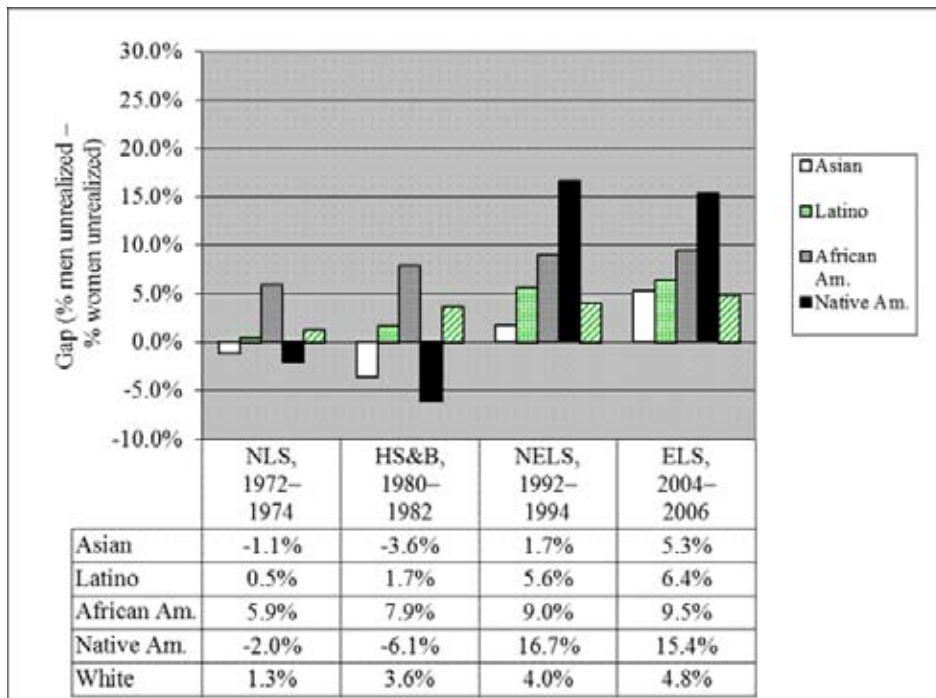
### Any postsecondary education unrealized expectations gender gap by SES

Figure 6 shows the unrealized expectations gender gap for expecting any level of postsecondary education and enrolling in any postsecondary institution 2 years after high school by SES quintile. This figure demonstrates a clear pattern with no exceptions: men have failed to realize their educational expectations at a consistently higher rate than women for the past 35 years. Although the unrealized expectations gender gap was consistently largest within the lowest SES quintile, the quintile with the second-highest gender gap has varied over time. For example, in the 1970s

**Figure 4. Any Postsecondary Education Unrealized Expectations Gender Gap**



**Figure 5. Any Postsecondary Education Unrealized Expectations Gender Gap by Race/Ethnicity**



and 1980s cohorts the quintile with the second-largest unrealized expectations gender gap was the fourth quintile. SES and the unrealized expectations gender gap became more tightly coupled in the 1990s cohort, however, and was fully realized in the most recent cohort, with the second-lowest SES quintile posting

the second-highest unrealized expectations gender gap. Since 1994, men from the lowest SES quintiles have failed to realize their educational expectations at a rate greater than their female peers and at a rate disproportionately higher than their more socioeconomically advantaged peers.

## DISCUSSION

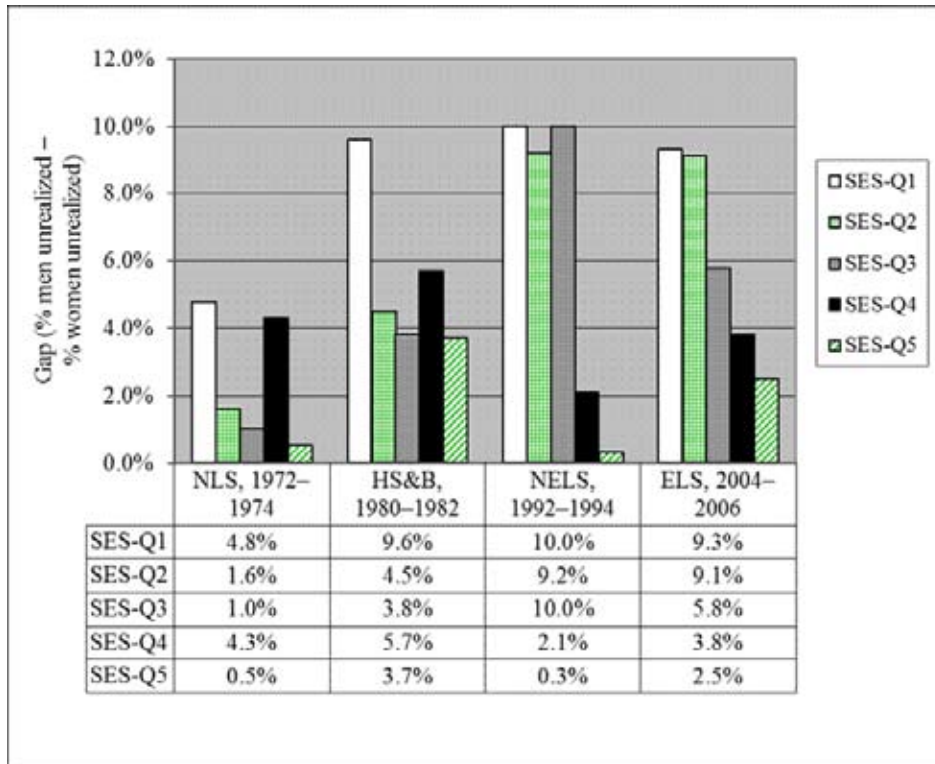
Our findings demonstrate how operational definitions of key concepts—“unrealized expectations” in this case—may change results, conclusions, and implications. We contrast how the two definitions we constructed yielded results that differed substantially in direction and magnitude, highlighting the importance of linking results to the methods and assumptions that led to those results. Understanding the connection between assumptions, operational definition, method, and results has implications for researchers planning future studies on expectations, enrollment, and other aspects of the college transition. In addition to the institutional research angle that our findings illuminate, they demonstrate how different assumptions, operational definitions, methods, and results could lead an institution to undertake completely different strategic planning decisions and initiatives.

Drawing on four cohorts of nationally representative high school graduates from the United States, our example of examining unrealized expectations has interesting and useful implications of its own. Interestingly, many of the important findings arise specifically because we analyzed the concept of “expecting postsecondary education” in two distinct ways. Using multiple operational definitions of unrealized expectations and 35 years of data resulted in a more complex and nuanced picture of how gender gaps have changed over time.

### Men Fail to Realize Their Expectations at a Rate Greater Than Women

The results show a clear trend regarding unrealized expectations, irrespective of the definition used. In the aggregate, men have failed to realize their expectations at a rate greater than women, and though shifting and vary-

**Figure 6. Any Postsecondary Education Unrealized Expectations Gender Gap by SES**



ing in degree, this has been true for the past 35 years. The fact the unrealized expectations gender gap has existed for the past 35 years is interesting, given the ubiquitous question levied by popular media in the past decade, “Where are the boys?” (see Fonda, 2000; Smith, 2011; Sommers, 2001). Although this question has been asked with greater frequency in recent years, there has been a persistent gender gap in unrealized expectations in which men have failed to realize their educational expectations at a rate greater than their female peers for the past 35 years.

*Unrealized expectations for a 4-year degree*

It seems that the concern with gender demographics has been most prevalent on 4-year postsecondary campuses, yet the unrealized expectations gender gap for enrolling in a 4-year institution 2 years after high school has decreased steadily over the past 35 years. Male

high school graduates in the 2006 cohort failed to realize their expectations at a level nearly equal to their female peers, with approximately 34% of both men and women having unrealized expectations. This near-gender parity in unrealized expectations within the 2006 cohort existed across three of the five racial groups, two of which (Latinos and African Americans) have received great focus given their history of under-representation in baccalaureate postsecondary education. Additionally, across the five SES quintiles the total percentage of the unrealized expectations gender gap in the most recent cohort was at a 35-year low. It is important to keep these findings in context. Although the unrealized expectations gender gap has generally decreased over the past 35 years, this obscures the overall difference in unrealized expectations for different racial groups. For example, across the four cohorts, 21%–35% of Asian and White students

have typically failed to realize their 4-year degree expectations by enrolling in a 4-year institution within two years of high school graduation irrespective of gender. This is in sharp contrast to Latino (51%–56%), African American (41%–51%), and Native American (40%–65%) students who, over time, have been far less likely to realize their educational expectations.

*Unrealized expectations for any postsecondary education*

Although the unrealized expectations gender gap for expecting a 4-year degree has decreased over the past 35 years, our findings showed an opposite trend for students expecting any level of postsecondary education and enrolling in a postsecondary institution within 2 years after high school. Consistently and increasingly, men have failed to realize their expectations at a rate greater than have women. The unrealized expectations gender gap for any postsecondary education was found among all racial groups but was largest for students of color and most pronounced among Native Americans. Similarly, our findings indicated that men from the two lowest SES quintiles, particularly since the mid 1990s, have failed to realize their expectations at a rate greater than have women, and at a rate generally greater than their peers. These findings may be of particular interest to those in institutional research, planning, and strategic enrollment management offices at 2-year institutions because they point directly to a leak in the pipeline between high school and pursuit of some level of postsecondary education, despite a stated expectation to do so.

**Definitions Matter**

Despite the fact that men have failed to realize their expectations at a rate greater than women consistently over the past 35 years, we found our two definitions of the unrealized expectations gender gap yielded substantively

different findings in terms of direction and magnitude, especially for trends over time and particularly when examined by race/ethnicity and SES. In our first definition, the unrealized expectations gender gap referred to the percentage difference between men and women who expected a 4-year degree but failed to enroll in a 4-year institution within 2 years after high school. In our second definition, the unrealized expectations gender gap referred to the percentage difference between men and women who expected any postsecondary education and failed to enroll in any postsecondary institution within 2 years after high school. Comparing Figures 1 and 4 and the clear reversal in direction of the gender gap in unrealized expectations, it is apparent the operational definition used influenced our findings.

Under our operational definitions, we found that although women's 4-year degree expectations have increased over the past 35 years, since the 1990s women have enrolled in alignment with those expectations at a lower rate than they did in earlier cohorts, and thus the gender gap in unrealized expectations has steadily decreased over time. Women are over-represented in community colleges (ED, 2010), however; based on our definition, these women—who may be attending 2-year colleges with the intention to transfer to a 4-year institution—were defined as having unrealized expectations. Our definition of unrealized expectations may have contributed to women appearing to have become less likely to realize their 4-year degree expectations over time. Recent evidence (C. Reynolds, 2012; Surette, 2001), however, suggests that women who attend 2-year colleges with the intention of transferring to a 4-year institution do so with a lower propensity than their male peers and those women who do transfer are less likely than men to earn their 4-year degree, and realize lower labor

market wages. The role of 2-year colleges in the entire process of realizing 4-year degree expectations and how this may differ for men and women and may be compounded by race/ethnicity and SES deserves more attention.

A final implication of our research, using our two definitions of “unrealized expectations,” is that conclusions are directly tied to operational definitions and assumptions about key concepts. As noted earlier, had degree attainment been used as the measure of “realization” as opposed to enrollment consistent with expectations 2 years after high school, the present study's findings may underestimate the gender gap in unrealized educational expectations. In light of these findings and the acknowledgment of how other conceptions of unrealized expectations can influence results and subsequent recommendations for policy and practice, researchers must consider the body of literature as a whole so as not to overstate any one finding (see Wells et al., 2011). Better yet, perhaps more research should present side-by-side results using different operational definitions and/or methods. If the findings are similar, then they are that much more robust. If they are different, particularly in direction as evidenced in the present study, it is a more accurate representation of the phenomenon's complexity and makes clear why it is so difficult to give bullet-point synopses of statistics and trends in higher education. For institutional researchers, side-by-side results using different operational definitions and/or methods can provide clearer results to inform strategic policy and planning decisions.

In essence, the answer to whether the unrealized expectations gender gap is growing or diminishing is . . . it depends. It depends on many factors about which the researcher makes subjective decisions. This becomes truer when further complicating the inquiry

by race and SES. “It depends” may be a difficult story for institutional researchers to tell their senior administrators or other policymakers because it fails to provide easy-to-digest headlines, sound bites, or action items, but it more accurately represents the complex educational landscape. The two sets of results presented are inextricably tied to a particular definition of “realization” that can and should be challenged, and, when compared to related research, will continue to complicate the notion of how realizing one's expectations—or in this case failing to realize one's expectations—differs for men and women. Addressing the unrealized expectations gender gap in ways that do not penalize or diminish the vital gains made by women over the past 35 years requires an understanding of how multiple definitions and intersecting identities like race/ethnicity and SES influence gendered trends. We suspect the “it depends” notion that comes out of these findings is not limited to gender gaps in realizing educational expectations but exists in other domains as well. It is our hope that institutional researchers, practitioners, and policymakers alike will use the nuanced complexity of this historical trend analysis to inform their approaches to institutional analyses, program decisions, and policy design in the multitude of areas influenced by higher education.

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