Problematizing College Internships: Exploring Issues with Access, Program Design, and Developmental Outcomes in three U.S. Colleges

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Abstract

Internships for college students are widely promoted as a "high-impact" practice, yet the academic literature is limited by terminological imprecision, lack of data on intern demographics, and insufficient attention to the impacts of program format on student academic and developmental outcomes. In this mixed-methods study we analyze survey (n=1,129) and focus group (n=57) data from students in three diverse U.S. colleges by using inductive thematic analysis, chi-square, and hierarchical linear modeling to document intern characteristics, access-related problems, program structure, and impacts on student outcomes. Results indicate that internship participation varied significantly by race, institution, enrollment status, and academic program, and that 64% of students who did not take an internship had desired to do so but could not due to scheduling conflicts with work, insufficient pay, and lack of placements in their disciplines. Students also reported high degrees of supervisor support, supervisor mentoring, and relationship between internships and academic programs—all program features that were significant predictors of students' satisfaction with internships and perceived value for their career development. Based on these results, we propose a processual model for studying internships, and we discuss implications for career advisors, faculty, and postsecondary leaders. Specifically, we urge employers, colleges and universities to ensure equitable access to internships for all students, to screen employer hosts for mentoring quality and capacity, and to recognize internships can be simultaneously a positive transformative experience for students and a vehicle for reproducing inequality.

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Internships are widely perceived as influential co-curricular experiences that benefit students, educators, and employers alike, based on the notion that they provide students with valuable professional experience and networks, enable educators to create venues for students to translate academic knowledge to real-world situations, and give employers a steady stream of new talent with fresh ideas from academia (Maertz, Stoeberl, & Marks, 2014; National Association of Colleges and Employers, 2018a). A growing body of research supports some of these claims by demonstrating positive impacts internships can have on students' employment status (Knouse, Tanner, & Harris, 1999), wages (Saniter & Siedler, 2014), and academic achievement (Binder, Baguley, Crook, & Miller, 2015). Consequently, internships have been designated as a "high-impact" practice that improves student outcomes (National Survey of Student Engagement, 2018; O'Neill, 2010), leading many state governments, colleges and universities, and workforce development boards to promote internship programs as a desirable solution to regional education-to-employment problems.

However, while the research literature on internships is promising, higher education's understanding of internships is limited in several ways. First, terminological inconsistencies such as poor or nonexistent definitions and/or compound questions make problematic the reported internship participation rates, as well as the validity and reliability of empirical studies (Silva et al., 201; National Survey of Student Engagement, 2018). Second, little research exists on internships outside of 4-year universities, with little known about these programs in 2-year institutions and minority-serving institutions such as historically Black colleges and universities (HBCUs). Third, although scholars and analysts have raised legal and ethical questions regarding unpaid internships (Curiale, 2009; Perlin, 2012), few studies have examined the nature of specific barriers to internship participation, particularly with respect to low-income, first-generation, and/or minoritized college students. Fourth, internship advocates and researchers too often pay insufficient attention to the impact of the structure and format of internships (Silva et al., 2018). Additionally, while long-term labor market outcomes such as wages and employment status are important outcomes to study with respect to internship participation, near-term effects on student satisfaction and career development are equally important, yet rarely studied (McHugh, 2017).

Without insights into these issues, postsecondary educators and administrators lack information that could inform continuous improvement of internship programs while ensuring that they are accessible to *all* students regardless of race, class, or social connection. To address these gaps in the literature, we launched the College Internship Study, a mixed-methods translational research project in Spring 2018 in partnership with three institutions—a comprehensive university in Wisconsin that is a predominantly White institution (PWI), a

racially mixed technical college (TC) in Wisconsin, and a HBCU in South Carolina. Data from an online survey (n = 1,129) and focus groups (n = 57) with students nearing graduation were analyzed to answer these research questions: (1) How many students are participating in internship programs, and does participation vary by student demographics, academic status, or life/employment situation? (2) What barriers exist for students to participate in internship programs? (3) What is the structure and format of internship programs? And, (4) How, if at all, is program structure and format associated with student satisfaction with their internships and their estimation of the value of the internship on their career development?

Background

What do we know about college internships and their impacts on students? First, the influential National Survey of Student Engagement (2018) indicates that 49% of college seniors completed or are in the process of completing an internship or a field experience, while the *Student Survey Report* issued by the National Association of Colleges and Employers (2018b) reports that 38% of juniors and 55% of seniors had an internship and/or co-op experience. However, the way internships are defined in these reports raises serious questions about their reliability and validity. For instance, the National Survey of Student Engagement uses a compound question to gauge participation in work-based learning experiences, asking students to report their involvement in an "internship, co-op, field experience, student teaching, or clinical placement"—each of which has unique formats, regulatory contexts, tasks, and educational goals, and thus arguably should be considered distinct types of co-curricular experiences (National Survey of Student Engagement, 2018). This conflations of job-training experiences is problematic because the definition of an internship, with respect to its duration, coordination with academic programs, and actual tasks, varies considerably by disciplinary, institutional, and national context (Hora, Wolfgram, & Thompson, 2017; Silva et al., 2018).

Despite these methodological issues, researchers have long examined the question of *which students* participate in internship programs. For example, Knouse et al. (1999) showed that White students are more likely to have an internship than Black students, and that higher achieving students are more likely to get an internship compared to students who are lower achieving. Overall, the evidence suggests that internship participation varies across career area and student characteristics including gender, race/ethnicity, socioeconomic status, and achievement levels (Binder et al., 2015). An issue related to the characteristics of internship participants is whether barriers exist for some students to access these opportunities in the first place. This question is most often raised with respect to low-income students and how unpaid internships are untenable for students struggling to pay for tuition, housing, and food. Curiale (2009) analyzed the legal issues associated with unpaid internships and argued the growing role of internships in making an individual competitive in the labor market *and* the rising number of unpaid opportunities was contributing to a "class divide" in the U.S. However, little empirical research exists on the specific barriers that inhibit students' abilities to secure and persist in internships. Given growing concerns about the inability of some college students to meet basic housing and food needs due to low incomes and/or the rising cost of college (Broton & Goldrick-Rab, 2018), this line of

inquiry is important, especially given prospects that some institutions do (or are considering) require internships in order to graduate.

Another important question facing the field pertains to the structure and format of internship programs themselves. Too often, internships are conceptualized as a singular event that students take or not, with little explication of the specific elements the experience itself comprises. Without a detailed accounting of these features, internships risk becoming a "black box" that is poorly understood while assumed to causally (and automatically) lead to student academic and/or labor market outcomes (Loeb et al., 2017; Silva et al., 2018). Several aspects of internships have been identified as being potentially influential in facilitating these outcomes: a graduation requirement, compensation, duration, supervisor support, supervisor mentoring, task clarity, autonomy, and link to academic program. One study of a cohort of college graduates in Germany who completed required or mandatory internships did not find any significant effect of internship experiences on later employment (Klein & Weiss, 2011). More scholars have addressed compensation, finding that unpaid interns are less likely to receive higher starting salaries and offers of full-time employment (Crain, 2016), more likely to report higher rates of feeling they have been taken advantage of (Siebert & Wilson, 2013), and are less likely to receive benefits (e.g., job leads) and positive developmental outcomes than paid interns (McHugh, 2017).

A related line of research examining structural features of internships focuses on the duration and supervisor quality of programs. In a study on internships in criminal justice programs, Murphy, Merritt, & Gibbons (2013) found that 400 hours (i.e., 10 weeks of full-time work) was viewed as the optimal length of an internship, though students and supervisors disagreed on the exact figure. Researchers have also demonstrated that supervisor mentoring (i.e., providing clear directions and feedback) and supervisor support (i.e., the perception of how well the supervisor cares about employee well-being) are positively related to students' career development and satisfaction with their internships (D'Abate, Youndt, & Wenzel, 2009; McHugh, 2017; Narayanan, Olk, & Fukami, 2010). Researchers have also examined the nature and impacts of the work that student interns perform. Beenen and Rousseau (2010) found that task clarity—or providing interns with clear understandings of expectations for work tasks—enhances student learning and pursuit of careers in the same field as the internship site. Additionally, the amount of task autonomy that interns have to design and perform tasks has been strongly associated with motivation and job satisfaction in some studies (Virtanen, Tynjälä, & Eteläpelto, 2014). Last, the stronger a student's academic coursework is linked to an internship, the more students will gain from the overall experience (Katula & Threnhauser, 1999; Narayanan et al., 2010).

In studying the impact of internships, many scholars focus on employment status (National Association of Colleges and Employers, 2014), postgraduation wages (Saniter & Siedler, 2013), and job market for former interns (Nunley, Pugh, Romero, & Seals, 2016). However, scholars examining non-monetary or employment-related outcomes of internships and related practices have found they contribute to positive academic outcomes such as improved grades (Parker, Kilgo, Sheets, & Pascarella, 2016), the quality of classroom discussions (Weible & McClure, 2011), improvements in what some call the developmental value of an internship, or students'

vocational self-concept and their confidence in their future careers (Knouse et al.,1999; McHugh, 2017), and the self-reported satisfaction a student has with his or her experience.

In addressing these issues related to college internships, we also adopt a process-oriented perspective of students' experiences with co-curricular programs, instead of viewing them as a singular event or point in time. In this paper, we build upon existing process-oriented models (e.g., Narayanan et al., 2010) by conceptualizing the internship experience as comprising three distinct yet related elements: (1) participation and access, (2) program design features, and (3) student outcomes and experiences. Our goal in advancing such a framework is to problematize the act of acquiring an internship, while opening up the black box of internship programs and improve our understanding of the relationships among specific program features and student outcomes.

Methods

The study reported in this paper employs a concurrent mixed-methods design, where both qualitative and quantitative data are collected and analyzed simultaneously to address the research questions (Creswell, 2014; Teddlie & Tashakkori, 2003). The dataset used in this analysis includes an online survey administered to and focus groups with college students at the three postsecondary institutions. These types of institutions were selected based on their distinct organizational contexts and student populations to collectively and individually contrast with those institutions most often included in research or media accounts about internships (e.g., PWIs, private liberal arts colleges, flagship universities). The PWI is in a suburb near two large metropolitan areas and has an enrollment of 4,168 undergraduate. Located in a growing metropolitan area, the TC enrolls 20,801 students. The HBCU is a rural campus with 2,038 undergraduate students.

The sampling frame for the study included students in their junior and senior years (the PWI and the HBCU) or in the second half of their degree programs (the TC) to increase the prospects that a student had had an internship experience. To focus on students' experiences in internships and not on related experiential learning programs, we excluded from the sampling frame students from programs with a required clinical practicum (e.g., teacher education, nursing and related allied health fields), apprenticeship programs, and students in the liberal arts transfer program at the TC. Based on resource constraints, we capped the size of the study sample at each institution at 1,250 students.

Data Sources

The procedure for administering the online survey began with a postal letter and cash incentive ($5) mailed to all students in the sampling frame (1,250 at the PWI, 1,250 at the TC, and 885 at the HBCU) that included a link to a unique password-protected URL that led to the survey instrument itself. The letter was followed by two subsequent email reminders, all of which included the promise of an additional $10 incentive if the survey was completed. The inclusion of pre- and postsurvey incentives was informed by research in survey administration on

how to increase response rates for online surveys (Dykema, Stevenson, Klein, Kim, & Day, 2013). The survey was completed by a total of 1,129 students—525 students (42% response rate) at the PWI, 395 students (31.6%) at the TC, and 207 students (23.4%) at the HBCU.

An analysis of possible non-response bias was conducted based on race and gender using chi-square tests. Our sample is representative of the study population based on races at each of the three institutions. The proportions of the female and male students in our survey sample are statistically significantly different than the study population, X^2 (1, N=5217) = 32.61, $p < .001$. Nevertheless, the present study applied unweighted analysis because, in the situation that results with and without weights turned out similar, using unweighted data is better due to smaller standard errors. Additionally, the unweighted regression model was performed controlling for gender, which provided unbiased and consistent estimates (Gelman, 2007).

After completing the survey, the students were asked if they were willing to participate in a focus group, which is a method for eliciting respondent perspectives in an interactive forum. Fifty-seven students participated in the focus groups across the three institutions, for which attendees received $20. Most groups included two to four students, though in some cases no-shows resulted in one-person interviews ($N = 7$). These focus groups or interviews were separated into those who had participated in an internship and those who had not. Students who had an internship experience during college answered questions primarily about the nature of their experience, while non-participants were asked questions about their reasons for not participating in an internship. Information about the composition of the survey and focus group sample is shown in Table 1.

Survey Measures

The following sections describe measures that assess student and internship program characteristics. All students answered questions about demographics, life and employment status, and academic situations (Table 1). All respondents were asked a question regarding whether they had participated in an internship in the last 12 months while in college. In the survey, the following definition of internships was provided to respondents:

> An internship is a position held within an established company or organization while completing a college degree, certificate, or diploma program. It involves working at the company or organization and performing tasks similar in nature and skill-level to tasks done by entry-level employees in the organization.

This definition was derived from examples of existing definitions and field-tested with a group of career advisors and experiential learning professionals.

Table 1. Study Sample Characteristics by Institution

Variable	Total Sample (n = 1,129)	PWI (n=525)	TC (n=395)	HBCU (n=207)	Focus Group (n=57)
Student Demographics					
Age in years, mean (SD)	27.26 (8.85)	25.81 (7.12)	30.95 (10.64)	23.91 (6.32)	25.88 (7.73)
Gender					
Male (%)	408 (36.14)	196 (37.33)	171 (43.29)	41 (19.81)	17 (29.8)
Female (%)	685 (60.67)	318 (60.57)	211 (53.42)	156 (75.36)	39 (68.4)
Race					
Asian American (%)	72 (6.38)	37 (7.05)	31 (7.85)	4 (1.93)	4 (7.0)
Black or African American (%)	243 (21.52)	35 (6.67)	19 (4.81)	189 (91.30)	19 (33.3)
Hispanic or Latino (%)	85 (7.53)	66 (12.57)	18 (4.56)	1 (0.48)	1 (1.8)
White or Caucasian (%)	673 (59.61)	361 (68.76)	312 (78.99)	0 (0)	30 (52.6)
First-generation student (FGS)					
FGS (%)	432 (38.26)	245 (46.67)	110 (27.85)	77 (37.20)	21 (36.8)
Not FGS (%)	670 (59.34)	273 (52.00)	276 (69.87)	121 (58.45)	36 (63.2)
Life and Employment Situation					
Having paid employment					
Yes (%)	871 (77.15)	425 (80.95)	323 (81.77)	123 (59.42)	38 (66.67)
No (%)	247 (21.88)	97 (18.48)	70 (17.72)	80 (38.65)	19 (33.33)
Working hours, mean (SD)	26.49 (13.44)	25.35 (12.37)	29.64 (14.40)	22.11 (12.65)	14.07 (12.14)
Annual income, mean (SD)	16603.56 (18658.36)	16729.45 (18733.35)	20978.14 (19503.73)	7390.48 (12418.95)	9933.52 (13802.98)
Receiving food assistance					
Yes (%)	58 (5.14)	21 (4.00)	28 (7.09)	9 (4.35)	4 (7.14)
No (%)	1044 (92.47)	498 (94.86)	357 (90.38)	189 (91.30)	52 (92.86)
Not paying bill					
Yes (%)	84 (7.44)	23 (4.43)	35 (8.86)	26 (12.56)	3 (5.36)
No (%)	1017 (90.08)	496 (95.57)	350 (88.61)	171 (82.61)	53 (94.64)
Academic Status					
Enrollment status					
Full time (%)	827 (73.25)	422 (80.38)	197 (49.87)	206 (99.52)	44 (77.19)
Part time (%)	302 (26.75)	103 (19.62)	198 (50.13)	1 (0.48)	13 (22.81)
Grade-point average: 1 (D+) to 10 (A), mean (SD)	8.09 (1.74)	7.82 (1.73)	8.54 (1.67)	7.86 (1.73)	8.64(1.57)
Academic program					
Arts and humanities (%)	139 (12.31)	70 (13.31)	56 (14.29)	13 (6.17)	5 (8.77)
Biosciences, agriculture, natural resources (%)	144 (12.76)	80 (15.21)	8 (2.04)	56 (26.54)	12 (21.05)
Business (%)	113 (10.01)	2 (0.38)	106 (27.04)	5 (2.37)	5 (8.77)
Communications, media, public relations (%)	311 (27.55)	153 (29.09)	118 (30.10)	40 (18.96)	6 (10.53)
Engineering (%)	46 (4.07)	30 (5.70)	7 (1.79)	9 (4.27)	1 (1.75)
Health professions (%)	46 (4.07)	23 (4.37)	14 (3.57)	9 (4.27)	1 (1.75)
Physical sciences, math, computer science (%)	75 (6.64)	48 (9.13)	22 (5.61)	5 (2.37)	4 (7.02)
Social sciences (%)	118 (10.45)	42 (7.98)	61 (15.56)	15 (7.11)	9 (15.79)
Social service professions (%)	137 (12.14)	78 (14.83)	0 (0)	59 (27.96)	0 (0)
Internship required					
Yes (%)	135 (44.85)	24 (20.17)	69 (67.65)	42 (52.50)	17 (29.82)
No (%)	166 (55.15)	95 (79.83)	33 (32.35)	38 (47.50)	38 (66.67)
Internship Participation					
Yes (%)	332 (29.41)	137 (26.10)	106 (26.84)	89 (43.00)	32 (56.14)
No (%)	795 (70.42)	388 (73.90)	289 (73.16)	118 (57.00)	25 (43.56)

Independent variables. Students who answered "no" to having participated in internships while in college answered questions about barriers to participation, while students who answered "yes" were presented with questions about the characteristics of their internship programs,

including whether it was required to graduate, whether it was paid or unpaid, the industry it was located in, and so on. In addition, several questions about the structure and format of the internship were posed. The first four scales were based on instruments used by McHugh (2017), and Beenen and Rousseau (2010), while the question pertaining to the relationship between academics and internships were drawn from the work of Taylor (1988).

Supervisor support was measured using four items, which assessed the extent to which supervisors care about interns' well-being and satisfaction at work, using a five-point scale ranging from one (not at all) to five (a great deal). Results of internal consistency tests using Cronbach's alpha was 0.9.

Supervisor mentoring consisted of five items that measured the nature of a supervisor providing specific strategies to achieve career goals, encouraging new ways to behave in the job, and giving feedback regarding job performance. These items used a five-point scale ranging from one (never) to five (extremely often), and the Cronbach's alpha using the current sample was 0.83.

Goal clarity consisted of two items that measured how respondents perceived the clarity of the goals and expectations regarding their workplace tasks. These two questions used a five-point scale with ratings that ranged from one (not at all clear) to five (extremely clear), and the Cronbach's alpha using the current sample was 0.89.

Autonomy was measured using two items that assessed how much flexibility respondents had to complete their work and how much freedom they had to make decisions during the internship, using on a five-point scale ranging from one (none) to five (a great deal). Results of the Cronbach's alpha using the current sample was 0.76.

Finally, the *relationship between their academic learning and internship experiences* was measured by one item that asked how related the internship was to the respondents academic program on a five-point scale ranging from one (not at all related) to five (extremely related).

Dependent variables. In this study we focus on two potential near-term outcomes of internships—satisfaction and perceived developmental value. *Satisfaction* with the internship was assessed by a single question asking how satisfied respondents were with their internship experiences on a five-point Likert scale ranging from one (not at all satisfied) to five (extremely satisfied). *Perceived developmental value* captures the degree to which respondents consider their experiences to have enhanced their career development (Beenen & Rousseau, 2010; McHugh, 2017). Three items asked about the skills or knowledge students gained during the internship, and the degree to which the internship helped them clarify their career objectives measured perceived developmental value. These items were measured using a scale ranging from one (not at all) to five (extremely), and the Cronbach's alpha using the current sample was 0.82.

Focus Group Protocol

Focus group sessions lasted about 1 hour. One or two researchers moderated and used a semi-structured protocol with 14 questions for students who had internships and 12 questions for those who had not. All students were asked details about their background, including their academic program and career goals. For students who had taken an internship, questions elicited information about their motivations for pursuing an internship, the nature of their work in the internship, the type of mentorship they received, the relation between their coursework and their internship, and what they think they gained from the experience. Students without internships were asked about their plans for participating in the future, obstacles to pursuing internship opportunities, and concerns they had about internships. At the HBCU, additional questions were posed to all students as part of another research project. These queries focused on their vocational self-identity and career decision-making processes. All students have remained unnamed to protect their identities and quotes have been edited for clarity.

Analytic Strategies

Statistical analyses of survey data. Before analyzing the survey data, we used a multiple imputation approach to impute and replace missing values. We used this approach rather than a listwise deletion procedure to avoid losing valuable information of key variables, thereby reducing the power of analysis (Cheema, 2014). Three steps of quantitative analyses were then applied using R statistical analysis software (R Core Team, 2018). First, to answer RQ1 regarding internship participation, we conducted a series of chi-square tests of independence as well as logistic regression analyses to explore relationships between student characteristics and internship participation. Next, to address RQ2 about barriers to internships, we report descriptive statistics from the survey item eliciting information on that point. To answer RQ3 regarding program structure, we report descriptive statistics of program features (e.g., supervisor mentoring) and compare these characteristics among the three study institutions using chi-square test of independence and one-way analyses of variance (ANOVA). Finally, to address RQ4 on the relationship between program structure and student outcomes, a two-step hierarchical regression analysis (Ross & Willson, 2017) examined the amount of variance explained in students' internship outcomes (i.e., satisfaction and perceived developmental value) by student characteristics and program-related factors. In the first model for both satisfaction and perceived developmental value, individual-level factors that included students' demographics (i.e., age, gender, race, first-generation student), life and employment status (i.e., annual income, paying bills, food assistance), and academic situation (e.g., institution type) were first entered as control variables in step one. Then, program-specific characteristics were added to the second model as a second step, including requirement status, internship payment status, industry areas, internship length, supervisor support, mentorship, goal clarity, relatedness to academic program, and autonomy. This approach allowed us to report the level of significance for each individual independent variable and to determine the change in R^2 and F created by the second block or variables (Petrocelli, 2003; Ross & Willson, 2017).

Focus group analysis. Focus group transcripts were analyzed in MaxQDA software to address RQ2 (i.e., barriers to internships), RQ3 (i.e., program features), and RQ4 (i.e., program format and their impacts on student outcomes). The first step was to segment the transcripts into more manageable units, where two researchers reviewed the focus group protocol and then coded two transcripts in parallel, reconciling the few discrepancies, whereupon the rest of the interviews were segmented by one researcher (Campbell, Quincy, Osserman, & Pedersen, 2013). The researchers then engaged in a round of analytical coding that involved engaging in inductive, open coding of two transcripts, noting recurrent phrases, ideas, and observations related to features of the internship experience highlighted by students, especially obstacles related to finding and securing an internship (Ryan & Bernard, 2003; Corbin, Strauss, & Strauss, 2014). Additionally, researchers coded deductively for constructs identified in the literature (e.g., barriers to internship participation such as financial concerns or a lack of time). The analysts then coded separate interviews using the preliminary codebook, reviewed their results and reconciled differences in code definition and application, and developed a final coding scheme, which one analyst applied to the entire corpus (Campbell et al., 2013).

Results

RQ1: How many students are participating in internship programs, and does participation vary by student demographics, academic status, or life/employment situation?

The first question addressed in our study pertains to internship participation, with a focus on demographic (e.g., race, gender), academic (e.g., enrollment status), and life- and work-related characteristics (e.g., employment status) of student participants and non-participants. We focus on these categories given prior evidence indicating that each facet of a students' life and identity is implicated in internship experiences and/or the college experience writ large. Of the 1,129 students who responded to our survey, 332 students reported having an internship experience (29.4%), with considerable differences across the three institutions: 137 at the PWI (26%), 106 at the TC (27%), and 89 at the HBCU (43%). We then examined whether demographic, academic status, and life/employment characteristics of students were associated with internship participation. Table 2 presents descriptive statistics for participants and non-participants, and the results of chi-square tests which indicates the relationship between internship participation and categorical variables reported in Table 1. Results showed that internship participation significantly varied by race, X^2 (3, N = 1,073) = 8.88, p = .03; institution type X^2 (2, N = 1,127) = 22.42, p < .001; enrollment status, X^2 (1, N = 1,129) = 15.65, p < .001; and academic program, X^2 (16, N = 1,128) = 35.19, p = .004.

Given the influence of race and institution type on participation, and our study's inclusion of group of institutions with distinct missions and student bodies (e.g., a HBCU), we conducted a logistic regression analysis to examine the relationship between internship participation and the continuous variables in Table 1 (i.e., annual income, working hours, and grade-point average [GPA]) while holding institution type and race constant. Results indicate that students who worked fewer hours at their main job (OR = 0.97, 95% CI = [0.96, 0.98], p < 0.001) and students who reported a higher GPA (OR = 1.21, 95% CI = [1.08, 1.34], p < 0.001) were more likely to

participate in internships. Collectively, these analyses indicate that participation in internships is not universal and equitable across all students within the study sample, but instead varies according to a range of demographic, academic, and life/employment situations and characteristics.

Table 2. Descriptive Statistics and Chi-square Tests by Internship Participation

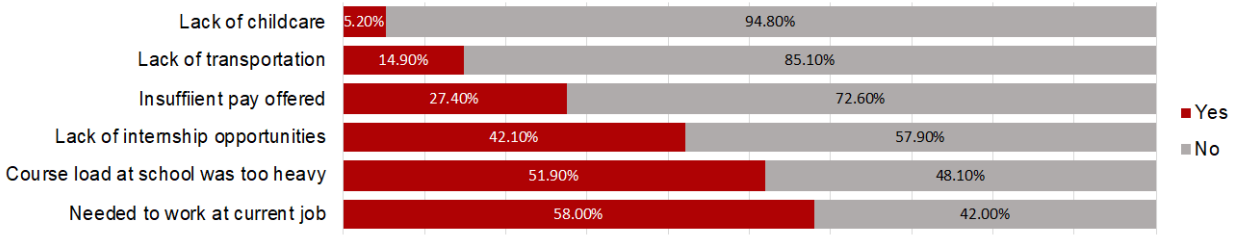
	Internship Participation (n=1,129)				
	No (n=797)	Yes (n=332)	χ^2	p	φ
Student Demographics					
Gender					
Female	475 (-1.39)	210 (1.39)	1.92	0.17	-0.04
Male	299 (1.39)	109 (-1.39)			
Race					
Asian American	54 (0.79)	18 (-0.79)			
Black or African American	154 (-2.95)	89 (2.95)	8.88*	0.03	0.09
Hispanic or Latino	63 (0.68)	22 (-0.68)			
White or Caucasian	490 (1.76)	183 (-1.76)			
First-generation student (FGS)					
Not FGS	473 (-0.25)	197 (0.25)	0.06	0.80	-0.01
FGS	308 (0.25)	124 (-0.25)			
Life and Employment Status					
Having a job					
Yes	259 (1.05)	612 (-1.05)	1.09	0.30	0.03
No	65 (-1.05)	182 (1.05)			
Receiving food assistance					
No	742 (0.06)	302 (-0.06)	0.004	0.95	0
Yes	41(-0.06)	17 (0.06)			
Not paying bill					
No	718 (-1.09)	299 (1.09)	1.18	0.28	-0.03
Yes	64 (1.09)	20 (-1.09)			
Academic Situation					
Institution					
PWI	388 (2.31)	137 (-2.31)			
HBCU	118 (-4.73)	89 (4.73)	22.42***	< 0.001	0.14
Technical college	289 (1.42)	106 (-1.42)			
Enrollment Status					
Full-time	557 (-3.96)	270 (3.96)	15.65***	< 0.001	-0.12
Part-time	240 (3.96)	62 (-3.96)			
Academic program					
Arts and humanities	88 (-1.82)	50 (1.88)			
Biosciences, agriculture, natural resources	83 (-3.45)	58 (3.14)			
Business	239 (3.12)	68 (-3.33)			
Communications, media, public relations	28 (-1.37)	18 (1.52)	35.19**	0.004	0.16
Engineering	85 (1.29)	28 (-1.08)			
Health professions	28 (-1.15)	17 (1.29)			
Physical sciences, math, computer science	50 (-0.64)	25 (0.82)			
Social sciences	104 (1.62)	31 (-1.80)			
Social service professions	84 (0.31)	34 (-0.90)			

Notes: Internship Yes was coded as 2, and internship No was coded as 1. Adjusted standardized residuals appear in parentheses on the right of group frequencies.
*p < .05, *p < .01, ***p < .001.

RQ2: What barriers exist for students to participate in internship programs?

Survey results. Next, we examine the critical issue of access, with a focus on the barriers that students report as inhibiting participation in internships. For survey respondents who had not taken an internship in the past 12 months *(N* = 794), a follow-up question asked if they had been interested in pursuing one, and 64% *(N* = 502) stated that they had intended to obtain an internship but could not for a variety of reasons. The most common reasons preventing students from taking an internship included the need to work at their current paid job (58%), a heavy course load (52%), and a lack of internships in their discipline or field (42%). Some variation is evident across the study institutions, which include students at the HBCU reporting inadequate internship opportunities more than students at Institutions A and B (see Figure 1).

Figure 1. In the past 12 months, why were you not able to pursue an internship? (N = 502)



Focus group and interview results. The 57 focus group participants provided additional detail on the nature of these barriers. Analysis of participant utterances revealed several themes, and here we elaborate upon the three most frequently reported issues: compensation, schedules, internship availability.

***Internship compensation*.** Students who reported compensation as a barrier highlighted the need to consider their financial stability and their subsequent preference for a paid internship. Some students had not taken an internship simply because they could not find any that paid enough for them to consider leaving other paid employment. As one student explained:

> My biggest struggle is most of them are unpaid. I am 26, getting married in a year … trying to do adult things and not getting paid for several months is just not something I can afford to do right now. I'm currently working a sad minimum wage job but it's at an animal shelter. So I'm at least getting some money. But I wouldn't be able to do classes, do the internship, and actually work to make money. Which is kind of important because I'm basically just paying for school as I can, at the moment. Money is unfortunately an important motivator in what I'm looking for in an internship, and very few are paid.

Another student found some internships with stipends, but explained that they were not large enough to even pay for the gas it would take to get to and from the internship. Besides the issue of compensation, the costs associated with applying for these opportunities may in themselves represent a barrier for some students. One student at the HBCU observed that, "I looked at the application, but you've got to pay $50 for the application fee—I mean, people don't have money like that to just be giving out!"

***Conflicts with school, work, and personal schedule*.** Another concern voiced by students involved balancing the scheduling demands of their paid employment, coursework, and an internship. As one student observed, the time students spend working at an internship, studying for their coursework, and managing "normal jobs" can be a tenuous balancing act. When students did find internships that were promising, some found that the hours needed for an internship conflicted with their time available for school, personal and family obligations, and paid employment, which ultimately resulted in them not pursuing internship leads. Additionally, students who had jobs in areas unrelated to their major but also were seeking internships, usually did so in order to acquire more professionally relevant experience. However, given that internship pay (if available) was often not enough money to cover tuition and other basic needs, several students explained that they had little choice but to continue working at their "main" job.

***Internship availability*.** Several students expressed concerns about the limited availability of internships in general and the competitive nature of these positions, which appears to disadvantage students lacking social connections or not attending prestigious universities. Several students talked about being rejected for multiple internship openings, which they described as frustrating and disheartening. One student explained that, "At (Institution Name) they put a lot of pressure on us to get internships, but they are so hard to get so it's very frustrating and annoying at times." Another student in that focus group observed that, "Yes, you've got to deal with the Ivy League kids, everybody else comes from these big schools … and we're just a small institution and people don't really know who we are." Students also emphasized the availability of internships as a field-specific problem. One student in physics and applied math explained that she hadn't taken an internship simply because, "There aren't any here offered for me in my field." In contrast, a business student explained, "there's just a lot of opportunities in the business program, (so) it's easy for us to get multiple internships."

Taken together, the qualitative and quantitative data indicate that the primary barriers for students in our study included scheduling conflicts (with paid work and coursework), the fact that an unpaid internship was simply not a realistic option for many students given other expenses and obligations, and a lack of internships for students in particular disciplines and for those attending less prestigious institutions.

RQ3: What is the structure and format of internship programs?

Survey results. For the 323 students in our study who reported their internship program features, we report how they described features of the structure and format of their internship program (Table 3).

Table 3: Descriptive Statistics of Internship Program Features and Tests of Institutional Differences

Internship Program Characteristics	Total Sample (n = 323)	PWI (n=135)	TC (n=103)	HBCU (n=85)	
					χ^2
Required to graduate					63.46***
Yes (%)	135 (44.85)	24 (20.17)	69 (67.65)	42 (52.50)	
No (%)	166 (55.15)	95 (79.83)	33 (32.35)	38 (47.50)	
Compensation					15.29**
Paid (%)	216 (66.87)	74 (54.81)	77 (74.76)	65 (76.47)	
Unpaid (%)	107 (33.13)	61 (45.19)	26 (25.24)	20 (23.53)	
Industry					60.32***
Agriculture (%)	10 (3.11)	3 (2.22)	4 (3.92)	3 (3.35)	
Construction (%)	8 (2.48)	2 (1.49)	6 (5.88)	0 (0)	
Education and health services (%)	92 (28.57)	44 (32.39)	19 (18.63)	29 (34.12)	
Financial activities (%)	19 (5.90)	11 (8.15)	5 (4.90)	3 (3.53)	
Information (%)	30 (9.32)	5 (3.70)	19 (18.63)	6 (7.06)	
Leisure and hospitality (%)	29 (9.01)	19 (14.07)	6 (5.88)	4 (4.71)	
Manufacturing (%)	12 (3.73)	6 (4.44)	6 (5.88)	0 (0)	
Other services (%)	53 (16.64)	24 (17.78)	16 (15.69)	13 (15.29)	
Professional and business services (%)	46 (14.29)	16 (11.85)	10 (9.80)	20 (23.53)	
Public administration (%)	11 (3.42)	2 (1.48)	3 (2.94)	6 (7.06)	
Retail trade (%)	12 (3.73)	3 (2.22)	8 (7.84)	1 (1.18)	
					F
Weeks of internship (SD)	13.89 (7.18)	15.21 (6.91)	14.80 (7.72)	10.68 (5.90)	12.42***
Supervisor support (SD)	4.21 (0.86)	4.22 (0.84)	4.02 (0.98)	4.41 (0.70)	4.91**
Mentoring (SD)	3.38 (0.86)	3.43 (0.83)	3.00 (0.89)	3.78 (0.73)	22.05***
Goal/task clarity (SD)	3.96 (0.90)	3.99 (0.97)	3.72 (0.93)	4.19 (0.84)	6.80**
Autonomy (SD)	3.88 (0.95)	3.93 (0.95)	3.75 (0.99)	3.96 (0.87)	1.49
Relatedness (SD)	4.03 (0.99)	4.12 (0.92)	4.23 (0.93)	3.66 (1.09)	9.02***

*p < .05, *p < .01, ***p < .001.

For internship participants, more students were in academic programs that required an internship to graduate than those with no such requirements (45% vs. 55%), more were compensated for their work than those taking unpaid internships (67% vs. 33%), and the average internship was approximately 14 weeks long. Additionally, almost one-third of the internships were in education and health services sector (29%), followed by professional and business services (14%), information (9%), and leisure and hospitality (9%).

With respect to the nature of supervision during their internships, students assigned relatively high ratings to the quality of supervisors' provision of support (M = 4.21, SD = 0.86), especially in comparison to the quality of mentoring during the internship (M = 3.38, SD = 0.86). Regarding the nature of the work conducted during the internship, students reported that the relationship between their internship and their academic program was relatively strong (M = 4.03, SD = 0.99), and that the clarity of task-related goals (M = 3.96, SD = 0.90) and the degree of autonomy for how to perform their work (M = 3.88, SD = 0.95) were also relatively high.

Given the observed variation in mean values across institutions on these measures, we then used chi-square and one-way ANOVA tests and found that all program features except task autonomy significantly varied across the three study institutions. For instance, whether internships being paid or not paid varied significantly across the three institution types, $\chi^2(4,323) = 15.29$, $p = .004$ with students in the TC and HBCU reporting higher percentages of

paid internships (75% and 76%), while only 55% PWI participants reported their internships as being compensated. In addition, students from the HBCU reported receiving greater supervisor support, mentoring, goal clarity than the other two institutions, while the technical students reported greatest degree of relatedness to academic program.

Focus group and interview results. For the 34 students in focus groups who had taken an internship, they described several prominent features of their internship programs, which are summarized by theme:

Several students described different kinds of *supervision* during their internships that varied in their amount of *training* and *autonomy*. Some students described their work as highly autonomous —meaning that they had little training, guidance, and feedback as they completed their tasks. Others felt less autonomous, meaning that they were trained and supervised when necessary. For example, one student said that his supervisor was, "not there watching," but that "he's there to answer questions and to fix issues that came up." Students also discussed varying levels of *mentoring*, with some supervisors actively coaching and mentoring interns' performance, whereas others had limited opportunities for mentoring. One student who received little feedback stated, "that's the part that's concerning—it's just that I want to know how I'm doing in my job."

Putting their internship experience in the context of their career development, some students felt that their work was directly *related to their future careers*. This often referred to honing their technical skills, but some students also described acquiring socio-emotional or "non-cognitive" skills that they felt would benefit them in their future employment (e.g., communication, teamwork, self-confidence). Finally, most students talked about their internship as *complementary to their school work*, explaining that some of what they learned in class was related to their internship, but that their internship gave them a better grasp on how these concepts worked in the real world: "I had the basic knowledge, but being able to sit there first hand and say, 'Okay, this is how a retirement account really works' has definitely taught me even more than what you can learn in a classroom."

RQ4: How, if at all, is program structure and format associated with student satisfaction with their internships and their estimation of the value of the internship on their career development??

Survey results. Finally, we report results from the analysis of the relationships among structural features of internship programs and their effects on the two main outcome variables of interest—student satisfaction and perceived developmental value. Table 4 presents the correlation matrix for all independent and dependent variables in the analysis. Supervisor support, mentoring, goal clarity, autonomy, and relatedness to academic program were significantly correlated with each other as well as with satisfaction and students' perceived development value, with correlation coefficients ranging from 0.11 to 0.69.

Table 4. Correlations of Independent and Dependent Variables (n=323)

		Industry Areas																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Age	1																		
2	Gender																			
	(1, female; 2, male)	-0.03	1																	
3	Race [a]	-0.23***	0.14*	1																
4	First-gen																			
	(1, No; 2, Yes)	0.07	0.13*	-0.06	1															
5	Annual income	-0.2***	0.1	0.29***	0.03	1														
6	Paying bills					0.06														
	(1, No; 2, Yes)	-0.08	-0.01	0	0.05		1													
7	Food assistance					-0.06														
	(1, No; 2, Yes)	-0.04	-0.05	0.01	0.06		0.24***	1												
8	Institution	-0.08	0.16**	0.6***	0.08	0.28***	-0.08	-0.08												
9	Required					0.13*														
	(1, No; 2, Yes)	-0.08	0.02	-0.12*	-0.05		0.12*	0.13*	-0.28***	1										
10	Paid (1, No; 2, Yes)	-0.03	-0.08	0.08	0.03	-0.05	0.11	0.04	0.2***	0.08	1									
11	Industry [b]	0.02	0.06	0.01	0	-0.05	-0.06	-0.07	-0.07	-0.01	-0.1	1								
12	Weeks	-0.15**	0.12*	0.24***	0.01	0.19**	0.05	0.02	0.24***	-0.1	-0.06	0.08	1							
13	Supervisor support	- 0.03	-0.09	-0.16**	-0.01	0	-0.1	-0.08	-0.07	0.06	0.04	-0.06	-0.01	1						
14	Mentoring	0.03	-0.08	-0.26***	-0.02	-0.07	-0.05	-0.05	-0.12*	-0.01	0.06	-0.1	0	0.69***	1					
15	Goal clarity	-0.05	-0.09	-0.15**	0.08	-0.01	-0.05	-0.01	-0.07	0.05	0.1	-0.03	0.08	0.65***	0.56***	1				
16	Autonomy	-0.01	-0.06	-0.13*	0.04	0.09	0.05	-0.06	0	0	0	0.03	0.1	0.40***	0.42***	0.33***	1			
17	Relatedness	-0.13*	0.01	0.17**	0.01	0.09	-0.05	-0.14*	0.17**	-0.06	0.04	0.09	0.19**	0.23***	0.11*	0.19**	0.15**	1		
18	Satisfaction	-0.07	-0.09	0.01	0.02	0.11	-0.07	-0.09	0.06	-0.01	0.02	-0.05	0.05	0.68***	0.57***	0.57***	0.32***	0.38***	1	
19	Developmental value	0.01	-0.09	-0.08	-0.02	0.04	-0.04	-0.02	0.01	-0.03	-0.02	-0.04	0.1	0.56***	0.58***	0.47***	0.31***	0.49***	0.66***	1

*p < .05, **p < .01, ***p < .001.

[a] Race levels: 1, race; 2, Black; 3, Hispanic/Latino; 4; White

[b] Industry areas: 1, agriculture, forestry, fishing and hunting; 2, construction; 3, education and health services; 4, financial activities; 5, information; 6, leisure and hospitality; 7, manufacturing; 8, other services (except pubic administration); 9, professional and business services; 10, public administration; 11, retail trade.

Table 5 includes the results of the hierarchical regression analysis, which indicates the contributions of student characteristics (Step 1) as well as the contributions of program features (Step 2) to internship satisfaction and development value.

Table 5. Results of Hierarchical Regression Analysis for Internship Satisfaction and Developmental Value

	Model 1		Model 2	
	Satisfaction	Developmental Value	Satisfaction	Developmental Value
Step 1: Students characteristics				
Age	-0.05	0.00	0.03	0.10*
Gender_Male	-0.11*	-0.08	-0.07	-0.06
Race (reference group: Asian American)				
Race_Black	0.48	0.59	0.21	0.44
Race_Latino	0.20	0.18	0.18	0.16
Race_White	0.28	-0.14	0.63*	0.25
First-gen_Yes	0.01	-0.03	0.01	-0.03
Annual income	0.02*	0.01	0.01	0.01
Paying bills_Yes	-0.29	-0.19	-0.12	-0.08
Food assistance_Yes	-0.49	-0.06	0.01	0.37*
Institution (reference group: HBCU)				
Institution_Technical college	-0.02	0.10	-0.04	0.04
Institution_PWI	0.26	0.49	0.13	0.62
R^2	0.07	0.06		
F	2.06	1.72		
Step 2: Internship program features				
Required_Yes			0.05	0.02
Internship being unpaid			-0.08	-0.16*
Industry (reference group: agriculture, forestry, fishing and hunting)				
Industry_Construction			0.88**	0.01
Industry_Finance and Insurance			0.59*	-0.14
Weeks			-0.01	0.00
Supervisor support			0.41***	0.15*
Mentoring			0.11***	0.20***
Goal clarity			0.53***	0.23
Autonomy			-0.03	0.18
Relatedness to academic program			0.21***	0.37***
R^2			0.61	0.57
ΔR^2			0.54	0.51
F			14.92	13.05
ΔF			12.86	11.33

*p < .05, *p < .01, ***p < .001.

With respect to satisfaction with the internships, gender and annual income were two significant control variables, with males reporting lower satisfaction score (β = -.11, p = .048) and students with higher annual income (β = .02, p = .019) reporting greater satisfaction with their internships. However, student characteristics only explained seven percentage points of the variation in satisfaction, R^2 = .07, F(11, 311) = 2.06, p = 0.023. After adding program characteristics to the model, construction industry (β = .88, p = .003), finance and insurance industry (β = .59, p = .029) were significant predictors of students' satisfaction with their internships. Additional variables that were significant (and positive) predictors of satisfaction included supervisor support (β = .41, p < .001), mentoring (β = .11, p < .001), goal clarity (β = .53, p < .001), and relatedness to academic program (β = .21, p < .001) significantly and positively predicted students' internship satisfaction. Model 2 explains 61% of the variation in

satisfaction, R^2 = .61, F(30, 292) = 14.92, p < .001. These results suggest that internship industry, supervisor behavior, nature of work in terms of clarity and link to coursework are important factors shaping how satisfied students are with their internships.

The second columns in both models include results from analyses of these predictors on the developmental value of students' internships. The results indicate that no Step 1 variables were significantly associated with developmental value, R^2 = .06, F (11, 311) = 1.72, p = .07; but that age (β = .10, p =.026) and receiving food assistance (β = .37, p = .041) became significant control variables when program features were added to the model. In addition, internships being compensated (β = - .16, p = .044), supervisor support (β = .15, p = .034), mentoring (β = .20, p < .001), and relatedness to academic program (β = .37, p < .001) significantly predicted students' perceived value, R^2 = .57, F(30, 292) = 13.05, p < .001. Interns without compensation rated the developmental value of their internships lower than paid interns. Conversely, supervisor support, mentoring, and an internship closely linked to coursework positively influence students' view of the developmental value of their internship.

The change in the R-squared value was computed using ANOVA, indicating that adding Step 2 variables (internship program features) significantly improved both the satisfaction model (F = 20.91, p < .001) and the developmental value model (F = 18.54, p < .001), with the second model explaining an additional 54% of the variance in satisfaction and 51% in developmental value.

Focus group and interview results. While we did not explicitly ask students in the focus groups about the relationship between the structure of their programs and their subsequent satisfaction and/or developmental outcomes, we include here themes about how students viewed the ultimate outcomes and benefits of their internship experiences. These results highlight that while satisfaction and developmental value are important outcome measures, additional effects of internship experiences should be considered.

For the 34 students who had participated in internships the most cited outcome of an internship was "real-world" or "hands-on" experience. Students discussed their internships' experiential value in terms of gaining experience in an authentic workplace setting with people engaged in the daily work of a profession, which was seen as distinct from yet complementary to their classroom experiences. Another outcome was the opportunity to explore the field, where students felt that they could use internships to "test out different avenues of what you might want to go into." For example, one student found that "I think the experience … at my internship confirmed that this is kind of what I want to do in the future," whereas another student found that their internship experience helped them see what they did not want to do in the future. Besides exploring different occupations, students spoke of internships as providing the opportunity to experience different workplace cultures, which could also inform decisions about their future.

Students also discussed how they grew personally during their internships. Examples included students' gaining a better understanding of themselves, personal interests, attitudes and

behaviors, perspectives on life and work, and sense of self as a professional. One student said, “It made me see what I was going to put up with and what I was not [going to put up with].” Finally, many students felt that their internship was key for their future job prospects, and that having internship experience would get their “foot in the door” for future jobs, either from the company where they interned or at other companies. Students whose goals were to go into academia or research also explained that this was essentially required for graduate school applications, so their internship served as an important stepping stone to access postgraduate education.

Discussion

There is a widespread and growing conviction that internships are a valuable or even essential co-curricular experience that have positive benefits for college students, educators, and employers alike. The global advocacy for internships, however, overlooks the fact that the research literature, while impressively diverse with respect to discipline and geographic locations, is hindered by methodological limitations and findings that are inconsistent and/or incomparable across research contexts. Further, long-standing concerns regarding the potential for internships—especially those that are unpaid—to exploit students, reproduce social inequalities, and even endanger students’ well-being (Curiale, 2009; Perlin, 2012) makes it a moral imperative that postsecondary leaders and educators pause before uncritically embracing internships as an unqualified good.

In this paper, we aim to open up the “black box” of internships by viewing them not as a singular event that is simply experienced (or not), but as a process and problem of access, design, and subsequent impacts on students’ development and career trajectories. Ultimately, we find that internship participation varies substantially across different student groups, that barriers to participation are real and formidable, and that the design of internship programs—especially the role of mentors and supervisors—needs careful attention for educators and employers to increase the prospects of college students having a satisfying and productive experience.

Participation Rates are Low and vary across Institutions and Student Characteristics

With respect to our first research question about internship participation, our study contributes to the field in three distinct ways. First, our survey instrument used in the College Internship Study addresses key technical limitations observed with other commonly used surveys (e.g., those conducted by Higher Education Research Institute, National Survey of Student Engagement, National Association of Colleges and Employers). Specifically, our instrument provides a clear definition of internships for respondents, does not include other forms of work-based learning in the definition or survey items (e.g., co-ops, apprenticeships, clinical placements), and elicits detailed information on the structure and format of internship programs. Future research should build upon this more fine-grained approach and national-level instruments should be updated and revised with respect to how internships are defined and measured.

Second, the results indicate lower participation rates (29.4%) than other national surveys, such as the National Survey of Student Engagement (49%) and Higher Education Research

Institute survey (61%). Different sampling strategies and corresponding limitations, such as our focus on students nearing graduation or other researchers focus on private and/or 4-year institutions only, as well as terminological issues outlined above may explain these differences. These discrepancies, however, indicate that a valid and reliable measure of internship participation on a national level does not yet exist.

Third, our study provides new evidence that substantial variation in internship participation exists across diverse institution types, and for students with particular demographic, academic, and employment characteristics. For instance, internship participation was higher at the HBCU (43%) in our study, in contrast to the TC (27%) and the PWI (26%). Additionally, students with longer working hours at their main jobs, those with part-time enrollment status, and who have lower GPA were all less likely to have an internship. Given increasing numbers of college students who work, and the necessity to do so with the rising costs of tuition and basic needs, these data should raise concerns about the potential barriers for working and/or low-income students to participate in an internship (Perna, 2010). Ultimately, more research on the institutional and personal factors related to internship participation is needed, and we argue that the unqualified goal of increasing participation in this "high-impact" practice must be tempered with the recognition that access to internships does not appear to be equally distributed across institutions and student demographics and/or life situations.

Barriers to Internship Participation may Exacerbate Inequality

Analyses of our survey and focus group data regarding barriers to internship participation provide additional insights into this problem of equity and access while raising several questions that researchers should examine. First, the fact that 64% of the students who did not take an internship (N = 795) had, in fact, wanted to pursue one but could or did not, indicates that additional research about barriers to participation should be a high priority. The qualitative and quantitative data collectively indicate that these barriers fall into three primary categories: scheduling conflicts (with paid work and coursework), a lack of internships in their discipline or region, and the fact that unpaid internships were simply not a realistic option for students to pursue given other expenses and obligations.

Of course, these barriers are unfortunate for all students seeking an internship opportunity, but are especially problematic for low-income, first-generation, and/or minoritized students for whom an internship may be an especially valuable professional experience. Students in these groups are at a higher risk for dropping out of college (Museus & Quaye, 2009), often have less robust social and professional networks with which to draw upon when making academic and career decisions (Rios-Aguilar & Deil-Amen, 2012), and are at a disadvantage with respect to the elite and White-dominated cultural capital implicated in employers' hiring decisions (Rivera, 2012). College and college-related career socialization provides students with a valuable opportunity to develop the attitudes, behaviors, connections, and résumé-building credentials that enhance one's prospects for getting a job. Disparities in access to internships for these students may have long-lasting effects, moderating the effects of education on upward mobility.

Finally, the issue of internship compensation cannot be ignored. It is promising that 67% of our study sample were paid for their internships, but the fact that 33% were not remains a concern. Despite the fact that some research has found that unpaid internships are correlated with confirming or rejecting career decisions, and thus may play an important role in helping students explore their professional interests (Crain, 2016), our results indicate a significant and negative effect on the developmental value of an internship. Furthermore, we argue that debates about intern compensation should not solely be limited to their effects on developmental or career-related outcomes, but should be steadfastly focused on concerns about equity, fairness, and student well-being. Prior research found that students from disadvantaged backgrounds are more likely to struggle to secure paid internships (Hun & Scott, 2017), and to ask students who are already struggling with tuition, housing, and basic needs-related bills is in our view simply unethical. Furthermore, with evidence that internships (and students) are being exploited to fill short-term labor short-falls and even to replace full-time workers (Chan, Pun, & Selden, 2015), educators, advisors, and employers must have student safety and well-being foremost in mind when thinking about internship requirements and opportunities on their campuses.

Structure of Programs and Their Impacts

Next, we consider one of the central issues addressed in this paper—the question of how internship program structure is associated, if at all, with student outcomes. Our findings suggest that internship programs with specific characteristics—especially supervisor support, supervisor mentoring, and relation to academic program—can lead to greater internship satisfaction and perceived value of the internship to students' career development. These results confirm prior research that highlights the importance of good job-site supervision, leading McHugh (2017) to state that, "for institutions that encourage and/or require internships, screening internship providers in terms of their supervisory commitment is warranted" (p. 377). We go further and argue that colleges and universities should vet potential internship hosts to ensure that they have adequate, trained supervisors on site to supervise student interns and provide regular mentoring and critical feedback (O'Neill, 2010). The presence of high-quality supervision, along with the need for meaningful work and not menial tasks such as making photocopies or serving coffee, is a long-standing critique of college internships that remains a pressing issue to this day (Frenette, 2013; Perlin, 2012). While not a completely failsafe mechanism for ensuring effective supervision of interns, agencies such as the North Carolina Community and Technical College Jobs Consortium provide an example of ways to increase the prospects of effective (and non-exploitative) internships by requiring employers to demonstrate the adequacy of their mentoring capacity while refusing to post unpaid internships. These basic safeguards should be standard practice for colleges and universities throughout the U.S.

Another programmatic design feature that the survey and focus group data indicate are important for student satisfaction and developmental outcomes is the relationship between the internship tasks and students' own academic and career trajectories. That is, a biology major aiming to work in the biotechnology sector is unlikely to find an internship in a bank very fulfilling or useful. That said, the fact that some students reported using internships as a venue

for exploring career opportunities, in the spirit of keeping an open mind about their ultimate career pathways, suggests that the importance of a close link between internship and major may vary from student to student.

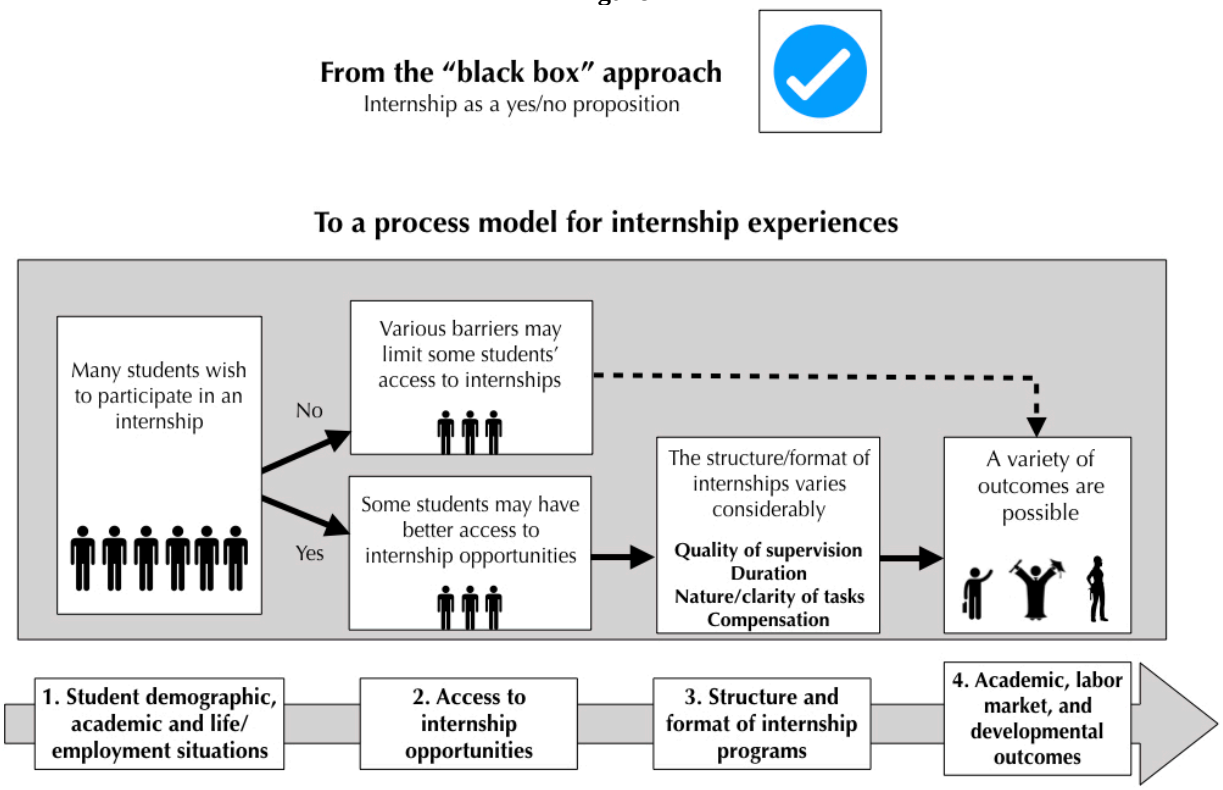
Future research in this area should examine this issue, along with the prospect that different internship formats may impact different kinds of students (e.g., discipline, region, first-gen, low-income, racial/ethnic minorities, gender) in different ways. In addition, we encourage researchers to examine the influence of internship duration on student outcomes in light of growing interest in "micro-internships" that are much shorter than traditional programs and to expand the conception of internship outcomes to include more psychosocial factors such as vocational self-concept, career exploration and adaptability (Savickas, 1997).

Conclusions and Next Steps

Several limitations to the study should be noted, particularly the prospects of selection and response bias in the survey component of the study, and self-selection bias for the student focus groups. While the results illuminate features of students' internship experiences at each participating campus, they should not be used to make general claims about college internships in general, or the experiences of students at the PWI, TC and HBCU in particular.

One of the primary conclusions that we can draw from this first dataset from the College Internship Study is that the field needs to adopt a process-oriented and developmental account of student experiences with internship programs. That is, instead of viewing internships as singular experiences that can be measured with a "yes/no" question about participation and that unquestionably cause positive labor market outcomes, we argue for a new perspective. Building upon existing processual models of internships (Diambra, Cole-Zakrzewski, & Booher, 2004; Sweitzer & King, 2013), we propose a framework for studying internships that takes account of the following stages: (1) the demographic, academic, and life/employment situations of college students, who then aim to (2) gain access to internship opportunities, which are influenced by geography, discipline, and local labor markets. If successful, students then (3) participate in an experiential learning space characterized by important structural features, which ultimately may lead to (4) outcomes such as students' employment status, future earnings, and changes in vocational self-concept and sense of self (see Figure 2).

Figure 2



Besides guiding research on college internships, we suggest that this framework be used by postsecondary leaders, career services and student affairs professionals, employers, and policymakers to better understand the specific forces at work that shape access to and experiences with one of the most promising yet vexing co-curricular experiences available to students—the college internship. Ultimately, the field should recognize that while internships may be a vehicle for the potential transformation of a person from a student to a budding professional, they may also reproduce inequality by making these experiences inaccessible to students who lack sufficient financial or social capital.

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