

Problematizing college internships: Exploring issues with access, program design and developmental outcomes

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Internships are widely promoted as a “high-impact” practice, yet the literature is limited by insufficient attention to the impacts of program format on student outcomes. In this mixed-methods study survey (n=1,129) and focus group (n=57) data from students in three U.S. colleges were analyzed 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 high degrees of supervisor support, supervisor mentoring, and relationship between internships and academic programs were significant predictors of students’ satisfaction with internships and perceived value for their career development. Consequently, colleges and universities should work to ensure equitable access to internships and that additional research be conducted on how individual, institutional, and programmatic factors influence student participation in internships and their subsequent outcomes.

Keywords: Internships, program structure, access, student outcomes

Internships are widely perceived around the world as an influential type of work-based learning (WBL) that provide benefits to students, educators, and employers alike (McHugh, 2017; Rose, 2013; Silva et al., 2018). The advocacy behind internships for college and university students is often predicated on the belief that these off-campus experiences provide students with valuable professional experience and networks, enable educators a venue for their students to translate academic knowledge to real-world situations, and provide employers with a pipeline of new talent - sometimes described as a “win-win-win” situation (Bailey, Hughes & Barr, 2000; National Association of Colleges & Employers, 2018a). In the U.S., interest in internships has risen dramatically since the early 2000s with their designation as a “high-impact” practice that leads to students’ academic and career success (Kuh, 2008; Parker, Kilgo, Sheets & Pascarella, 2016), 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 international research literature on internships is promising, the fields of higher education and work-based learning (WBL) 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., 2018; National Survey of Student Engagement, 2018). Second, in the U.S., 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

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(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, while long-term labor market outcomes such as wages and employment status are important outcomes of internships to investigate, near-term effects on student satisfaction and career development are equally important yet rarely studied (McHugh, 2017). Finally, while work-integrated learning (WIL) differs from WBL in its being focused on campus-based learning experiences, there are enough similarities for insights into what constitutes high-quality WBL can also shed light on how to design effective WIL opportunities for college students (Atkinson, 2016; Jackson, 2018).

To address these gaps in the literature, the research team launched a mixed-methods translational research project in the Spring of 2018 in partnership with three institutions in the U.S.—a comprehensive university that is also a predominantly white institution (PWI), a technical college, and a historically black college and university (HBCU). Data from an online survey (N = 1,129) and focus groups (N = 57) with students nearing graduation were analyzed to answer the following 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 is known about internships and their impacts on college students? First, the influential National Survey of Student Engagement (NSSE) survey in the U.S. indicates that 49% of seniors in 4-year institutions completed, or are in the process of completing, an internship (National Survey of Student Engagement, 2018). However, the NSSE survey uses a compound question to inquire about participation, asking students to report their involvement in an “internship, co-op, field experience, student teaching, or clinical placement” – each of which has unique formats, regulations, and educational goals, rendering them distinct (and incomparable) types of co-curricular experiences (Hora, Wolfgram & Thompson, 2017; Silva et al., 2016). Thus, claims based on NSSE data that internships are a high-impact practice that lead to student engagement and success (Kuh, 2008) should be interpreted with caution, given that the survey item encompasses a diverse array of (undefined) experiences that can be interpreted in a myriad of different ways by survey respondents.

Despite these methodological issues, researchers have long examined the question of which students are participating in internship programs. For example, Knouse, Tanner and Harris (1999) showed that higher achieving students are more likely to get an internship compared to students who are lower achieving, while other scholars have found that internship participation varies by student characteristics such as gender, race/ethnicity, socioeconomic status, and achievement levels (Binder, Baguley, Crook, & Miller, 2015). A related issue is whether or not barriers exist for some students – particularly low-income students – to access these opportunities in the first place – a concern that led Curiale (2009) to argue that the growing

labor market advantage of completing an internship and the rising number of unpaid opportunities was contributing to a class divide in the U.S. (see also Parks-Yancy, 2012). However, little research exists on the barriers that inhibit access to internships.

Another question facing the field pertains to the structure and format of internship programs themselves. Too often, internships are viewed as a singular event that students take or not, with little clarification about specific features of an internship. Consequently, internships risk becoming a “black box” whose interior mechanisms are poorly understood (Loeb et al., 2017; Silva et al., 2018). Several structural features of internships have been identified as especially influential: compensation, supervisor support and mentoring, task clarity, and links to academic programs (McHugh, 2017). For instance, researchers have shown that supervisor mentoring (i.e., providing clear directions and feedback) and supervisor support (i.e., how well the supervisor cares about employee well-being) are positively related to students’ career development and satisfaction with their internship (D’Abate, Youndt, & Wenzel, 2009).

Researchers have also examined the impacts of the work that interns perform. Beenen and Rousseau (2010) found that task clarity—or providing interns with clear expectations for tasks—enhances learning and pursuit of careers in the same field as the internship. Additionally, the stronger a student’s coursework is linked to internship tasks, the more students will gain from the experience (Narayanan, Olk & Fukami, 2010). Each of these studies highlights a key issue in the world of WIL and internships – that simply making them available does not guarantee that the experience will have a strong and positive impact on student outcomes. Instead, much depends on how they are structured by educators and employers, and experienced by students (O’Neill, 2010).

In terms of the potential impacts an internship may have on college students, many scholars focus on employment status, engagement and completion (Kuh, 2008), post-graduation wages (Saniter & Siedler, 2014), and the desirability of former interns in the job market (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 et al., 2016), the quality of classroom discussions (Weible & McClure, 2011), and 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). These studies highlight the need to conceptualize the potential impact of internships in ways that go beyond employment and wages.

CONCEPTUAL FRAMEWORK: A DEVELOPMENTAL PERSPECTIVE

The potential economic, psycho-social, and academic outcomes of internships are not guaranteed simply because an institution makes them available and/or mandatory, as student experiences can range from an abysmal summer spent pouring coffee and making copies to transformational experiences that embody the best practices of experiential education (Perlin, 2012; O’Neill, 2010). This is one reason why treating internships as a simple binary question (i.e., did you take an internship during college – yes or no?) is both an empirical and conceptual mistake.

A process-oriented perspective on internships was advanced by management scholars Narayanan, Olk and Fukami (2010) in a study of internship programming at a Portuguese university. Based on the contention that most internship research ignores the interplay among the three actors involved in the experience –

students, university, and the company –a framework is presented in this paper that enables the testing of specific antecedent and processual factors that may contribute to particular student outcomes. Sweitzer and King (2013) outlined four stages of internship experience that included anticipation, exploration, competence and culmination. In focusing on how students themselves construct meaning of their experiences, and also the importance of interns being introduced into new (and potentially jarring) socio-cultural and professional contexts, this framework is consistent with developmental perspectives in counseling and vocational psychology that also emphasize constructivist and processual accounts of development (Savickas et al., 2009).

In this paper, these developmental and process-oriented approaches are built upon by conceptualizing internships as an experience that is strongly shaped by initial access (or lack thereof) and program structure, with impacts that include both cognitive (i.e., satisfaction and perception of personal development) and

career-related outcomes. The goal in advancing such an approach is to move beyond an uncritical acceptance of internships as a high-impact practice, by problematizing the act of acquiring an internship and the structure of the internships themselves, both of which may or may not lead to positive student outcomes.

METHODS

The study reported in this paper employs a concurrent mixed-methods design, where both qualitative and quantitative data were collected and analyzed simultaneously to address the research questions (Teddlie & Tashakkori, 2003). The dataset used includes both a survey and focus groups with students at three postsecondary institutions: a comprehensive predominantly white institution (PWI) with an undergraduate headcount of 4,168 students (hereafter named Institution A), a technical college with 20,801 students (Institution B), and an HBCU with 2,038 undergraduates (Institution C). To focus on students' experiences in internships and not on related programs, students from programs with a required clinical practicum (e.g., teacher education) or apprenticeship programs were excluded from the sampling frame. Based on resource constraints the size of the study sample was capped at each institution at 1,250 students.

DATA SOURCES

Data collection was conducted during Spring 2018. The procedure for administering the online survey began with a letter and cash incentive (\$5) mailed to students in the sampling frame (1,250 at Institution A, 1,250 at Institution B, and 885 at Institution C). The survey was completed by a total of 1,129 students – 525 students (42% response rate) at Institution A, 395 students (31.6%) at Institution B, and 207 students (23.4%) at Institution C.

After completing the survey, the students were asked if they were willing to participate in a focus group. A total of 57 students participated in focus groups, for which attendees received \$20. These focus groups or interviews were separated between students who had participated in an internship and those who had not. Students who had an internship experience answered questions primarily about the nature of their experience, while non-participants were asked questions about their reasons for not participating. Information about the composition of both the survey and focus group sample are shown in Table 1.

TABLE 1: Study sample characteristics by institution.

Student Characteristics	Total (n = 1129)	Institution A (n=525)	Institution B (n=395)	Institution C (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 (%)	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)
GPA: 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, & NR (%)	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, & PR (%)	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, & CS (%)	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)

Note: NR = natural resources; CS = computer science; PR = public relations

SURVEY MEASURES

The survey instrument included questions about respondent demographics, academic and life situations (e.g., employment status), and the students were also asked whether or not they had participated in an internship in the last 12 months. The following definition of internships was provided:

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 prior to data collection.

Students who answered "no" to having an internship answered questions about barriers to their participation, while students who answered "yes" were presented with a series of questions about the characteristics of their internships. Four scales were based on instruments used by McHugh (2017) and Beenen & Rousseau (2010), and included four items measuring supervisor support (Cronbach's alpha=0.9), five items measuring supervisor mentoring (Cronbach's alpha=0.83), two items measuring goal clarity (Cronbach's alpha=0.89), two items measuring autonomy (Cronbach's alpha=0.76) and one item measuring the relationship between academic learning and the internship.

In this study two potential short-term outcomes of internships were examined—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 whether 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 one hour and were moderated by one to two researchers. For students who had taken an internship, questions were asked about their motivations for pursuing an internship, the nature of their work in the internship, the type of mentorship they received in their internship, and other related questions. Students without an internship experience were asked about obstacles to pursuing internship opportunities and general concerns about internships and their future careers.

Analytic Strategies

To answer research question one regarding participation, R statistical analysis software was used to conduct a series of chi-square tests of independence and logistic regression analyses to explore relationships between student characteristics and internship participation. Next, to address research question two about barriers to internships, descriptive statistics from the survey item on that point are

reported. To answer research question three regarding program structure, descriptive statistics of program features are reported and compared among institutions using chi-square test of independence and one-way analyses of variance (ANOVA). Finally, to address research question four on the relationship between program structure and student outcomes, a two-step hierarchical regression analysis examined the amount of variance explained in students' internship outcomes (i.e., satisfaction and 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 (e.g., age, gender, race), life and employment status (e.g., annual income, food assistance), and academic characteristics were entered as control variables in step one. Then, program-specific characteristics (e.g., industry areas, internship length) were added to the second model as a second step. This approach allowed the researchers 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 of variables (Petrocelli, 2003).

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 involved two researchers reviewing 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 analytical coding that involved engaging in inductive, open coding of two transcripts, noting recurrent phrases and observations related to notable features of internships, especially obstacles related to accessing an internship (Corbin, Strauss, & Strauss, 2014). 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.

RESULTS

RQ1: Characteristics of Students Participating in Internships

Of the 1,129 students who responded to the survey, 332 reported having an internship (29.4%), with considerable differences across institutions: 137 at institution A (26%), 106 at institution B (26%), and 89 at institution C (43%). Next, an analysis was conducted to determine whether demographic, academic status, and life/employment characteristics of students were associated with internship participation. Results showed that internship participation significantly varied by race, $\chi^2(3, N = 1,073) = 8.88, p = .03$; institution type $\chi^2(2, N = 1,127) = 22.42, p < .001$; enrollment status, $\chi^2(1, N = 1,129) = 15.65, p < .001$; and academic program, $\chi^2(16, N = 1,128) = 35.19, p = .004$.

Given the influence of race and institution type on participation, and the study's inclusion of group of institutions with distinct missions and student bodies (e.g., a historically black college or university, a logistic regression analysis was conducted to examine the relationship between internship participation and the continuous variables in Table 1 (i.e., annual income, working hours, and grade-point average) while holding institution type and race constant. Results indicate that students who worked fewer hours at their main job (odd ratio = 0.97, 95% CI = [0.96, 0.98], $p < 0.001$) and students who reported a higher grade point average (odd ratio = 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, but instead varies according to a range of demographic, academic, and life/employment situations and characteristics.

RQ2: Barriers to participation in internship programs

Next, the critical issue of access was examined, 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 ($N = 797$), a follow-up question asked if they had been interested in pursuing one, and 64% ($N = 509$) 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%) (see Figure 1).

The 57 focus group participants provided additional detail on the nature of these barriers. In this section the two most frequently reported issues are discussed in detail: compensation and scheduling.

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. One student had 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 were problematic for some students. One student 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!"

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 study, personal and family obligations, and paid employment, which ultimately resulted in them not pursuing internship leads. 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.

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

For the 323 students in the study who reported their internship program features, features of the structure and format of their internships are reported in Table 3.

For internship participants, more students were in academic programs that required an internship in order 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. 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 ($M = 3.38$, $SD = 0.86$). Students also 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 their degree of work autonomy ($M = 3.88$, $SD = 0.95$) was also relatively high.

TABLE 2: Descriptive statistics and chi-square tests by internship participation.

	Internship Participation (n=1129)		χ^2	p	ϕ
	No (n=797)	Yes (n=332)			
Student Demographics					
Gender					
Female	475 (-1.39)	210 (1.39)	1.92	.17	-0.04
Male	299 (1.39)	109 (-1.39)			
Race					
Asian	54 (0.79)	18 (-0.79)	8.88*	.03	0.09
Black or African American	154 (-2.95)	89 (2.95)			
Hispanic or Latino	63 (0.68)	22 (-0.68)			
White or Caucasian	490 (1.76)	183 (-1.76)			
First-generation student					
Not FGS	473 (-0.25)	197 (0.25)	0.06	.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	.30	0.03
No	65 (-1.05)	182 (1.05)			
Academic Situation					
Institution					
A comprehensive PWI (Inst A)	388 (2.31)	137 (-2.31)	22.42***	< .001	0.14
An HBCU (Inst C)	118 (-4.73)	89 (4.73)			
A technical college (Inst B)	289 (1.42)	106 (-1.42)			
Enrollment Status					
Full-time	557 (-3.96)	270 (3.96)	15.65***	< .001	-0.12
Part-time	240 (3.96)	62 (-3.96)			
Academic program					
Arts and Humanities	88 (-1.82)	50 (1.88)	35.19**	.004	0.16
Biosciences, Agriculture, & NR	83 (-3.45)	58 (3.14)			
Business	239 (3.12)	68 (-3.33)			
Communications, Media, & PR	28 (-1.37)	18 (1.52)			
Engineering	85 (1.29)	28 (-1.08)			
Health Professions	28 (-1.15)	17 (1.29)			
Physical Sciences, Math, & CS	50 (-0.64)	25 (0.82)			
Social Sciences	104 (1.62)	31 (-1.80)			
Social Service Professions	84 (0.31)	34 (-0.90)			

Note: Internship Yes was coded as 2, and internship No was coded as 1.

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

Adjusted standardized residuals appear in parentheses on the right of group frequencies.

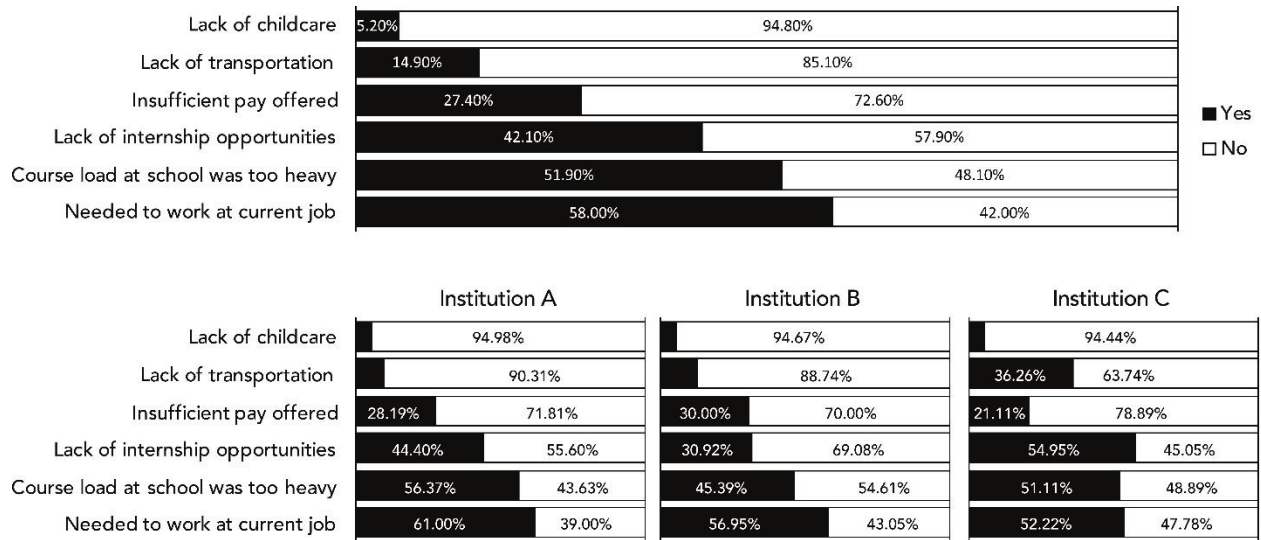


FIGURE 1: Types of barriers to internship participation.

Given the observed variation in mean values across institutions on these measures, chi-square and one-way ANOVA tests were used to examine whether these features varied across the three study institutions. Results showed that all program features, except task autonomy, significantly varied across the institutions A, B, and C. For instance, whether internships being paid or not paid varied statistically significantly across the three institution types, $\chi^2(4, 323) = 15.29, p = .004$ with students in institution B and C reporting higher percentages of paid internships (75% and 76% versus 55%).

The 34 students who had taken an internship in focus groups described several features of their programs. Some students described different kinds of supervision that varied in their amount of autonomy. Some students described their work as highly autonomous while others experienced more hands-on training and supervision. For example, one student said that his supervisor was, “there to answer questions and to fix issues that came up,” while others described situations where they worked with almost complete autonomy. Similarly, students also discussed varying levels of mentoring, with some supervisors actively coaching interns’ performance, whereas others had little mentoring. As one student said, “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 university 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.”

TABLE 3: Descriptive statistics of internship program features and tests of institutional differences.

Internship program Characteristics	Total Sample (n = 323)	Institution A (n=135)	Institution B (n=103)	Institution C (n=85)	χ^2
Being required					63.46***
Required to graduate (%)	135 (44.85)	24 (20.17)	69 (67.65)	42 (52.50)	
Not required to graduate (%)	166 (55.15)	95 (79.83)	33 (32.35)	38 (47.50)	
Being paid or unpaid					15.29**
Paid internship (%)	216 (66.87)	74 (54.81)	77 (74.76)	65 (76.47)	
Unpaid internship (%)	107 (33.13)	61 (45.19)	26 (25.24)	20 (23.53)	
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***

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

RQ4: How, if at all, is program structure associated with student outcomes?

Finally, results from the analysis of the relationship between structural features of internship programs and their effect on student satisfaction and perceived developmental value are discussed. Supervisor support, mentoring, goal clarity, autonomy, and relatedness to academic programs were correlated with each other as well as with satisfaction and students' perceived development value, with correlation coefficients ranging from .11 to .69. Table 4 includes the results of the hierarchical regression analysis, which indicates the contributions of student characteristics (step 1) as well as the contributions of internship features (step 2) to internship satisfaction and developmental value.

With respect to satisfaction with internships, gender and annual income were two significant control variables. However, student characteristics in model 1 only explained a small percentage of the variance in satisfaction, adjusted $R^2 = .03$, $F(9, 313) = 2.17$, $p = 0.024$. Variables that were significant (and positive) predictors of satisfaction in model 2 included supervisor support ($\beta = .43$, $p < .001$), mentoring ($\beta = .48$, $p < .001$), goal clarity ($\beta = .10$, $p = .001$), and relatedness to academic program ($\beta = .12$, $p < .001$). Beta is standardized regression coefficient, which means every unit increase in the predictor variable, the outcome variable will increase by beta coefficient value. For example, in the current model, every one unit increase in supervisor support, students' internship satisfaction will increase 0.43 controlling for other variables. The model 2 explains 56% of the variation in satisfaction, adjusted $R^2 = .56$, $F(18, 304) = 23.33$, $p < .001$. 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 were 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 one variables were significantly associated with developmental value and it explained little of the variance in students perceived developmental value. Adjusted $R^2 = .04$, $F(9, 313) = 2.44$, $p = .01$. When program features were added to model 2, internships being compensated ($\beta = -.15$, $p = .044$), supervisor support ($\beta = .17$, $p = .013$), mentoring ($\beta = .83$, $p < .001$),

and relatedness to academic program ($\beta = .21, p < .001$) significantly predicted students' perceived value, adjusted $R^2 = .54, F(18, 304) = 21.95, p < .001$. 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. It is noteworthy that supervisor mentoring played a more important role than supervisor support, which means that supervisors' specific direction and feedback about interns' task performance and career planning were perceived more beneficial towards their development.

TABLE 4. Hierarchical regression results of internship satisfaction and developmental value.

	Model 1		Model 2	
	Satisfaction	Developmental Value	Satisfaction	Developmental Value
Step 1: Students characteristics				
Age	-.04	.01	.01	.07
Gender_Male	-.12*	-.09	-.07	-.07
Race (reference group: Asian)				
Race_Black	.39	.57	.32	.52*
Race_Latino	.16	.14	.17	.10
Race_White	.28	-.17	.61	.05
First-gen_Yes	.01	-.10	.00	-.09
Annual income	.18*	.15*	.04	.03
Institution (reference group: comprehensive PWI)				
Institution_HBCU	-.09	-.11	-.23	-.19*
Institution_Technical college	-.36**	-.85*	-.14	-.81
R^2	.03	.04		
F	2.17	2.44		
Step 2: Internship program features				
Required_Yes			.02	.01
Internship being unpaid			-.13	-.15*
Weeks			-.01	.00
Supervisor support			.43***	.17*
Mentoring			.48***	.83***
Goal clarity			.10**	.04
Autonomy			-.01	.00
Relatedness to academic program			.12***	.20***
R^2			.56	.54
ΔR^2			.53	.50
F			23.33	21.95
ΔF			21.16	19.51

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

The change in the R-squared value indicated that adding step 2 variables (internship program features) significantly improved both the satisfaction model ($F = 41.93, p < .001$) and the developmental value model ($F = 38.81, p < .001$), with the second model explaining an additional 53% of the variance in satisfaction and 50% in developmental value. Additionally, to see if the data met the assumption of collinearity, our analysis indicated that multicollinearity was not a concern with VIF values ranging from 1.05 – 1.60.

For the 34 students in the focus groups who had participated in internships, the most cited outcome of an internship was “real-world” or “hands-on” experience. 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 helped them see what they did not want to do in the future. Similarly, some spoke of internships as providing the opportunity to experience different workplace cultures, which could inform decisions about their future.

Students also discussed how they grew personally during their internships. As 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 also felt that their internship was key for their career prospects, and that the internship experience would get their “foot in the door,” either from the company where they interned or at other firms. Students whose goals were to go into academia or research also explained that this was critical for having a competitive graduate school application.

DISCUSSION

There is a widespread and growing conviction that internships are a valuable or even essential “high-impact” practices that have positive benefits for college students, educators, and employers alike. However, the data reported in this paper confirm that concerns regarding the quality and accessibility of internships are warranted. The remainder of this paper discusses the need for a process-oriented perspective and highlight key findings from the study and implications for research, policy, and practice.

Towards a Developmental and Processual Perspective on Internship Experiences

One of the primary conclusions that can be drawn from the data is that instead of viewing internships as a singular experience that can be measured with a yes/no question about participation, a new perspective is needed. Building upon existing processual models of internships (Narayanan, et al., 2010; Sweitzer & King, 2013), a framework is proposed for studying internships that takes account of the following stages: (1) the demographic, academic, and life/employment situations of 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 (e.g., quality of mentoring); which may ultimately lead to (4) a variety of outcomes that may include employment, future earnings, and changes in vocational self-concept and sense of self (see Figure 2).

This socio-technical perspective of internship participation complements the more developmental focus of existing stage models that focus on students’ experiences (e.g., alienation within new workplace settings), and together they provide a more multi-dimensional and accurate depiction of internships than is available from a simple yes/no question of participation.

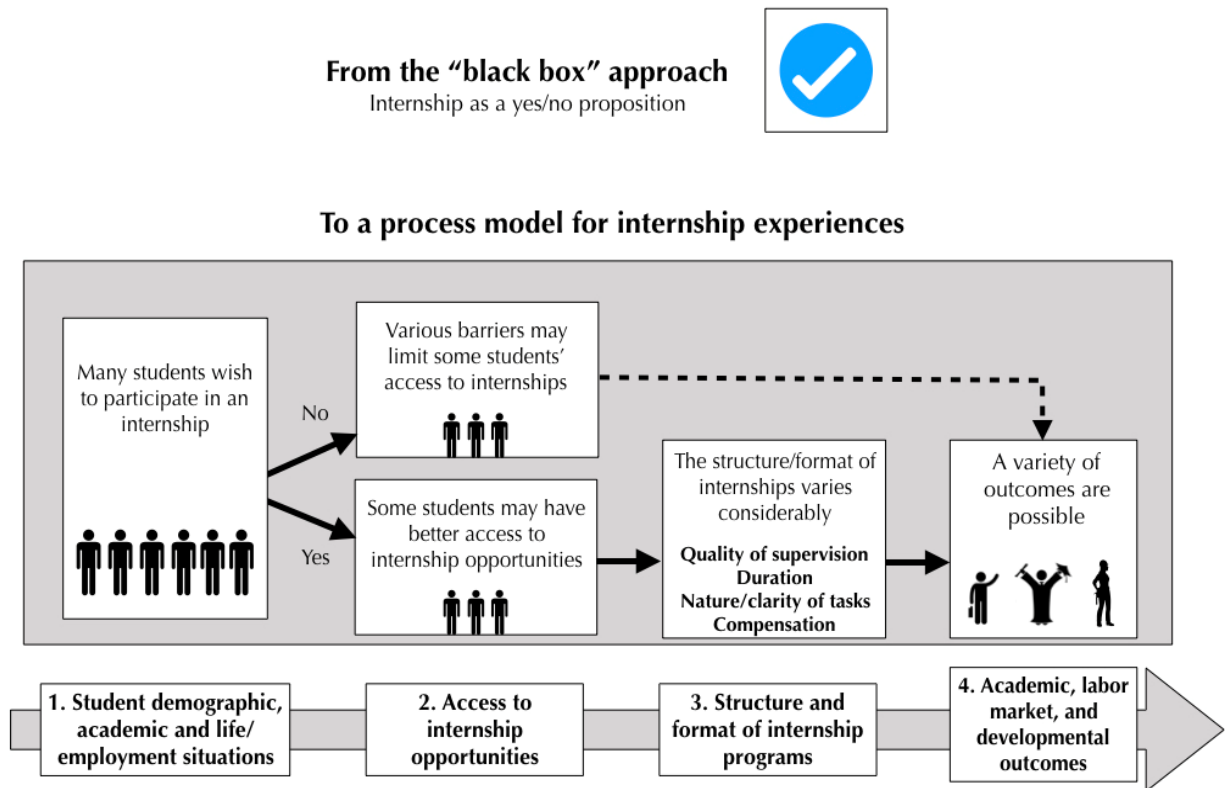


FIGURE 2: A process model of the internship experience.

Participation Rates Are Low and Vary Across Institutions and Student Characteristics

With respect to internship participation, this study contributes to the field in two ways. First, the survey instrument addresses key technical limitations observed with other commonly used surveys (e.g., the National Survey of Student Engagement). Specifically, the instrument used in this study provides a clear definition of internships, does not include other forms of work-based learning in the definition or survey question (e.g., co-ops, 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 revised with respect to how internships are defined and measured.

Second, this study provides new evidence that substantial variation in internship participation exists across diverse institution types, and also for students with particular demographic, academic, and employment characteristics. For instance, students with longer working hours at their main jobs and who have a lower grade point average were less likely to have an internship. Given increasing numbers of students who are working while attending college, and the necessity to do so with the rising costs of tuition and basic needs, these data should raise concerns about the barriers to internships for working and/or low-income students (Perna, 2010).

Third, the results raise questions about the relative influence of individual-level factors (e.g., student demographics and life situation) and programmatic factors (e.g., discipline) on internship participation, satisfaction and developmental value. For instance, the data show that internship participation varied significantly by race, institution type, enrollment status, and academic program, which suggest to us that future research needs to explore in depth precisely how and why these different factors impact participation. Similarly, race, income level, and institution type were significantly associated with internship satisfaction and developmental value, which raises the prospect that a complex combination of student demographics, life situation, and institution or disciplinary forces intersect to shape students' experiences in internship programs (Finley & McNair, 2013).

Barriers to Internship Participation May Exacerbate Inequality

Analyses of the data regarding barriers to participation provide additional insights into this problem of equity and access while also raising several questions that researchers should examine in the future. The fact that 64% of the students who did not take an internship ($N = 797$) had, in fact, wanted to pursue one but could or did not, indicates that additional research about the barriers to participation should be a high priority for the field. The data indicate that these barriers fall into three 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.

These barriers are unfortunate for all students, but may be especially problematic for low-income, first-generation, and/or minoritized students for whom an internship may be an especially valuable professional experience. This is due to the fact that students in these groups are at a higher risk for dropping out of college (Museus & Quaye, 2009), often have less robust social networks (Parks-Yancy, 2012), and are at a disadvantage with respect to the elite and White-dominated cultural capital implicated in employers' hiring practices (Hora, 2020; Rivera, 2012).

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 may play an important role in helping students explore their professional interests (Crain, 2016), the results indicate a significant and negative effect on the developmental value of an internship. Further, debates about intern compensation should not solely be limited to their effects on developmental 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 (Hunt & Scott, 2017), and to ask students who are already struggling with tuition, housing, and basic needs-related bills is in our view unethical. Furthermore, with evidence that internships (and students) in one of the world's largest economies and postsecondary education systems – that of China – are being exploited to fill short-term labor short-falls and even to replace full-time workers (Chan, Pun, & Selden, 2015), it is essential that educators, advisors, and employers must have student well-being foremost in mind when thinking about internship opportunities on their campuses and in their organizations. While internships in China are necessarily different from the three U.S. institutions discussed in this paper, the potential for the exploitation of college students exists around the world and should be guarded against on a global level.

Structure of Internship Programs and Their Impacts

Next, one of the central issues in this paper is addressed—the question of how internship program structure is associated, if at all, with student outcomes. The findings suggest that internship programs with certain characteristics—especially supervisor support, supervisor mentoring, and relationship to academic programs—can lead to greater 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).

As a result, 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 feedback. The presence of high-quality supervision, along with the need for meaningful work (and not menial tasks such as making photocopies), is a long-standing critique of internships that remains a pressing issue to this day (Frenette, 2013; Perlin, 2012).

Another programmatic design feature that the data indicate are important for student satisfaction and developmental outcomes is the relationship between internship tasks and students' academic and career trajectories, which is a core feature of effective WIL. For example, a biology major aiming to work in the biotechnology sector is unlikely to find an internship in a bank very fulfilling. That said, the fact that some students reported using internships to explore career opportunities 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 in different ways.

CONCLUSIONS

Several limitations to the study should be noted, particularly the limited focus on three institutions in a single country. Additionally, the possibility of selection and response bias in the survey and focus group components of the study as well as the limited sample makes generalizations or claims about college internships in general, or the experiences of students at participating institutions untenable.

Besides guiding future research on internships, the process-oriented framework outlined in this paper can be used by postsecondary leaders, career services professionals, and policymakers to better understand the specific forces that shape access to and experiences with the college internship. Ultimately, the field of higher education and WIL needs to recognize that while internships may be a vehicle for the transformation of a person from a student to a budding professional, they may also serve to reproduce inequality by making these experiences inaccessible to thousands of students who lack sufficient financial or social capital to locate and pursue these opportunities.

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About the Journal

The International Journal of Work-Integrated Learning (IJWIL) publishes double-blind peer-reviewed original research and topical issues dealing with Work-Integrated Learning (WIL). IJWIL first published in 2000 under the name of Asia-Pacific Journal of Cooperative Education (APJCE). Since then the readership and authorship has become more international and terminology usage in the literature has favored the broader term of WIL, in 2018 the journal name was changed to the International Journal of Work-Integrated Learning.

In this Journal, WIL is defined as "*an educational approach that uses relevant work-based experiences to allow students to integrate theory with the meaningful practice of work as an intentional component of the curriculum*". Defining elements of this educational approach requires that students engage in authentic and meaningful work-related task, and must involve three stakeholders; the student, the university, and the workplace. Examples of practice include off-campus, workplace immersion activities such as work placements, internships, practicum, service learning, and cooperative education (Co-op), and on-campus activities such as work-related projects/competitions, entrepreneurship, student-led enterprise, etc. WIL is related to, but not the same as, the fields of experiential learning, work-based learning, and vocational education and training.

The Journal's main aim is to enable specialists working in WIL to disseminate research findings and share knowledge to the benefit of institutions, students, co-op/WIL practitioners, and researchers. The Journal desires to encourage quality research and explorative critical discussion that leads to the advancement of effective practices, development of further understanding of WIL, and promote further research.

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Types of manuscripts sought by IJWIL is primarily of two forms; 1) *research publications* describing research into aspects of work-integrated learning and, 2) *topical discussion* articles that review relevant literature and provide critical explorative discussion around a topical issue. The journal will, on occasions, consider best practice submissions.

Research publications should contain; an introduction that describes relevant literature and sets the context of the inquiry. A detailed description and justification for the methodology employed. A description of the research findings - tabulated as appropriate, a discussion of the importance of the findings including their significance to current established literature, implications for practitioners and researchers, whilst remaining mindful of the limitations of the data, and a conclusion preferably including suggestions for further research.

Topical discussion articles should contain a clear statement of the topic or issue under discussion, reference to relevant literature, critical and scholarly discussion on the importance of the issues, critical insights to how to advance the issue further, and implications for other researchers and practitioners.

Best practice and program description papers. On occasions, the Journal also seeks manuscripts describing a practice of WIL as an example of best practice, however, only if it presents a particularly unique or innovative practice or was situated in an unusual context. There must be a clear contribution of new knowledge to the established literature. Manuscripts describing what is essentially 'typical', 'common' or 'known' practices will be encouraged to rewrite the focus of the manuscript to a significant educational issue or will be encouraged to publish their work via another avenue that seeks such content.

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