A Sociocultural Analysis of Internship Supervision: Insights From a Mixed-Methods Study of Interns at Five Postsecondary Institutions

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Abstract

Internships are widely promoted extra-curricular experiences that can have positive impacts on student outcomes, yet how specific elements of internships contribute to these outcomes and facilitate learning is understudied. In this sequential mixed-methods study, we use sociocultural learning theory to interpret data from surveys ($n = 435$) and focus groups ($n = 52$) with students at five postsecondary institutions. After stepwise linear regression analyses indicated that supervisor behaviors were significantly associated with intern satisfaction and career development, analyses of qualitative data revealed features of positive (clear communication, availability, feedback) and negative (unavailability, inattention to learning) aspects of supervision. These results highlight the value of legitimate peripheral participation in internships, and the need for colleges and employers to carefully design and monitor these pedagogic spaces.

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Internships are widely viewed as a high-impact practice that improves student engagement and success. Higher education professionals and policymakers have called for all colleges and universities to enact policies mandating internships for graduation (Busteed & Auter, 2017), or to encourage students strongly to participate in internships during their college careers (Kuh, 2008). Advocacy behind internships for college and university students is often based on the notion that such off-campus work experiences provide students with valuable professional experience, enable educators a venue for their students to translate academic knowledge to authentic situations, and provide employers with a pipeline of new talent—making internships a "win-win-win" situation (National Association of Colleges and Employers, 2018). Enthusiasm for internships is further supported by a growing body of research demonstrating that internships have positive impacts on students' post-graduate employment status (Nunley et al., 2016), academic achievement (Parker III et al., 2016), and developmental outcomes, such as self-confidence and adaptability (Ocampo et al., 2020). Coupled with growing pressure on postsecondary institutions to cultivate students' "employability" and to pay more attention to their career prospects (Tomlinson & Holmes, 2016), work-based learning is becoming one of the most influential ideas shaping research, policymaking, and educational practice in higher education in the early 21st century.

Yet internships remain something of a black box, in the sense that specific programmatic features and student experiences that contribute to student outcomes are not well understood (Silva et al., 2016). This lack of knowledge is problematic for postsecondary institutions, employers, and policymakers who may wish to continually improve, update, or even redesign how internship programs are implemented. Too often, especially in studies reliant on datasets from surveys such as the National Survey of Student Engagement (2020), internships are conceptualized and measured as a simple matter of participation, where components of programs such as duration, compensation, or the nature of supervision are overlooked, and students' engagement with internships is measured by a simple yes/no question. This approach, which obscures the processes whereby internships actually shape student outcomes, stands in contrast to models of student development that pay close attention to attributes of postsecondary institutions and programs, such as faculty values and behaviors (Astin & Antonio, 2012), an institutions' cultivation of cultural belonging (Museus et al., 2017), and discussions with diverse classmates (Harris & BrckaLorenz, 2017). Given these concerns, a critical question facing higher education in general, and the fields of career advising and student affairs, is: What specific features of an internship are most associated with student development and professional growth?

An interdisciplinary body of research has begun to address this question by examining the effects of specific features of internships on student outcomes, including studies on how task

design (Rogers et al., 2019) and effective mentoring and supervision (McHugh, 2017; Rose et al., 2014) influence student outcomes. Scholars are beginning to study the effects of these programmatic features on *labor market outcomes* such as employment status and wages immediately after graduating from college, as well as on *developmental outcomes* such as the self-perceived developmental value of an internship (McHugh, 2017) and *psychosocial outcomes*, including career adaptability (Ocampo et al., 2020). In addition, internship researchers are developing process models that examine the specific mechanisms whereby internships affect student outcomes and development, with a focus on antecedent factors present at the firm, student, and college level (Narayanan et al., 2010), and the stages of an intern's experience as they enter a new workplace (Sweitzer & King, 2013). However, research that integrates these developments (i.e., a focus on program features, attention to developmental outcomes, and processes of development) remains uncommon. There is a gap in our understanding of the mechanisms governing these critical features of the internship experience.

We address this gap in the literature by reporting findings from a sequential mixed methods study. Our team collected and analyzed survey ($n = 435$) and focus group ($n = 52$) data from students at five institutions (i.e., one Historically Black College and University, one technical college, and three four-year public institutions). Analyses of survey data using hierarchical linear regression techniques revealed the importance of supervisor support and mentoring. We then conducted inductive thematic analyses of qualitative data that revealed student accounts of the nature and process of supervision, which varied from inadequate (e.g., poor communication, no guidance or feedback) to exemplary (e.g., quality supervision in a supportive environment). Analyses also revealed how these dynamics were situated in specific situations and workplace contexts. We conclude with an in-depth analysis of the intern-supervisor relationship, showing how a sociocultural perspective on learning and development within work-based learning contexts (e.g., Guile & Young, 1998; Lave & Wenger, 1991) illuminates the importance of high-quality supervision. Following this analysis, we discuss implications of these data for educational research, policymaking, and practice.

Background

Even when an institution makes internships available and/or mandatory, the benefits of an internship to students' personal and professional development are not guaranteed. Student experiences can range from a summer spent making photocopies 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 conduct an internship during college? – yes or no) is both an empirical and a conceptual mistake. The question glosses over the distinct steps or processes that student interns experience on the job, as well as the variation in how internships can be designed and implemented in the field.

Features of Internship Programs Associated with Student Outcomes

In recognition of the need to study specific features of internships, scholars have investigated a variety of structural elements of internships including compensation (McHugh, 2017), task goal

clarity (Beenen & Rousseau, 2010), the quality of mentorship (Jeske & Linehan, 2020), and interns' autonomy at work (D'abate et al., 2009). Moreover, empirical studies have shown that minoritized students are less likely to participate in internships (Knouse et al., 1999), and interns with a minority background were less likely to be employed 12 and 18 months after completion of an internship (Luecking & Fabian, 2000). In the remainder of this section, we briefly review the literature on the program elements included in our study—task goal clarity and autonomy, coordination with academic programs, and quality of supervision—followed by an overview of research on the relationship between internships and student development.

Task Goal Clarity and Autonomy

The nature of the tasks that student interns perform on the job has long been a focus of study. There is considerable concern that internship labor has the potential to be menial and non-educational, if not downright exploitative and illegal (Chan et al., 2015; Perlin, 2012). In addition, many researchers have built upon work on job design in management and business, based on the notion that the characteristics and daily routines of a person's job can have significant impacts on their performance and satisfaction (Beenen & Rousseau, 2010; Rogers et al., 2019). In this vein, scholars have found an association between student satisfaction and the *clarity* with which expectations for task performance (i.e., task goal clarity) are conveyed to the intern (Feldman & Weitz, 1990), especially for students who are newcomers to an organization and the world of work (Bauer et al., 2007).

In addition to clear articulation of the nature and expectations for work tasks, high quality design of tasks provides value and meaning for the intern (D'abate et al., 2009; Feldman & Weitz, 1990). In contrast, ill-structured tasks with unclear value or meaning—as in the proverbial case of interns making coffee—have negative impacts on interns' satisfaction, while also increasing their stress levels and impairing their ability to learn (Beenen & Rousseau, 2010; Frenette, 2013; Saks & Ashforth, 1997). These findings highlight the potential for an interns' tasks to either promote or hinder their satisfaction and professional development.

Another aspect of an interns' work that has been extensively studied is the *autonomy* they are granted by supervisors regarding the discretion they have (or not) to complete their assigned tasks (McHugh, 2017). Prior research has demonstrated that the more autonomy interns are given in executing their tasks, the higher their reported workplace learning, career crystallization, and job satisfaction (Feldman & Weitz; 1990; Taylor, 1988; Ramani & McHugh, 2019; Virtanen et al., 2014). However, other scholars have found no relationship between task autonomy and outcomes such as satisfaction, developmental value, and job pursuit intentions (D'abate et al., 2009; McHugh, 2017). Given insights from the learning sciences on the need for novices to have task autonomy slowly scaffolded from more to less oversight, these findings underscore the prospect that too much autonomy for some interns may in fact be detrimental to their learning and development (Lave & Wenger, 1991; Pea, 2004).

Coordination With Academic Programs

Another potentially important feature of internships is the relationship between an internship and students' academic programs. In fact, one of the primary claims of work-based learning programs is that when students are situated in "real-world" settings where they must address authentic problems of practice and transfer their scholastic knowledge to the workplace, they benefit in both their academic progress and in their career development (O'Neill, 2010). However, there is often no guarantee that an intern's tasks will be related to their previous coursework, and it is not unheard of for interns to spend weeks engaged in work that is unrelated to their career aspirations (Perlin, 2012). Unfortunately, outside of research in fields where internships are more formalized, such as medical education (Scicluna et al., 2014), there is little research examining the nature of academic-internship coordination and/or its impact on student outcomes.

Quality of Supervision and Mentoring

One of the most extensively studied features of internship programs is that of supervision and mentoring. A considerable body of research has demonstrated that both 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 outcomes, including intern satisfaction, interns' commitment to internship sponsor, and a positive attitude toward the hosts' industry (D'abate et al., 2009; Liu et al., 2011; Rose et al., 2014). In a study of management student interns, McHugh (2017) found that supervisor support was especially important, as it was associated with higher perceived developmental value of the internship, and greater satisfaction and intent to pursue a job with the host organization. One of the reasons that supervisors may be so important to the interns' experience is that they represent (to the intern) the organization and even the profession, and may provide guidance, encouragement, and resources regarding the students' career plans (McHugh, 2017). The importance of mentors for new hires and/or novices to a profession has also been well established in the management literature, where socialization processes are enhanced by the presence of a supportive mentor (Allen et al., 2017).

At the same time, an inattentive or even hostile supervisor can have a profoundly negative impact on an intern (Perlin, 2012). In addition, insufficient preparation for the supervisor-intern relationship can lead to disappointment among students. In a study of students in a co-op program, Fifolt & Searby (2010) found that some students had unrealistic or inaccurate assumptions about the student-supervisor relationship, including expectations for close bonds that never emerged and a lack of direction amid an abundant amount of work and responsibility. Detailed insights into student-supervisor dynamics, however, are uncommon in the internship literature, as most studies rely on surveys that necessarily cannot capture fine-grained details about student observations, insights, and experiences.

Research Overview: Developmental Processes of Student Internship Participation

The literature outlined above represents a promising yet incomplete account of the ways that specific elements of internship programs may enhance student growth. With respect to

development and professional growth among college students, one of the challenges in the literature is the tendency to focus on academic or labor market outcomes; it is less well understood how internships support developmental outcomes. One notable exception is a 1995 study of 165 college seniors by Brooks and colleagues, who found that certain internship features (e.g., autonomy and task variety) positively influenced psychosocial outcomes, such as career self-efficacy and self-concept crystallization. More recently, Ocampo and colleagues (2020) studied undergraduate hotel and restaurant management students in China, focusing on career adaptability. They discovered that internships led to an increase in the students' psychological resources for adapting to change and/or disruption in their own career plans.

Renewed interest in the psychosocial outcomes of an internship, and the specific features of the experience that are most conducive to promoting these outcomes, signals a welcome and necessary shift in the literature. This is due in part to the growing consensus that a person's career trajectory is neither linear nor completely shaped by external forces, but instead is a non-linear process largely influenced by the person's ability and desire to adapt to environmental changes (e.g., a recession) and control their own careers (Porfeli & Savickas, 2012). Career Construction Theory (CCT) was developed in part as a response to prior developmental models that assumed individuals' career stages would unfold in a stable labor market where long-term employment with a single firm was the norm (Super, 1957) and that people's interests and personality traits remain similarly stable (Holland, 1973). In the development of CCT, Savickas and colleagues (2009) argued that even the notion of "career development" should be retired in favor of "life trajectories," where individuals construct or design their own lives and careers amid a socio-cultural and economic climate characterized by change (p. 241).

These processes of learning and development do not unfold in a vacuum. Features of the environment (e.g., faculty-student relations), and the degree of student involvement or engagement with these features, must also be taken into account (Astin & Antonio, 2012; Harris & BrckaLorenz, 2017; Museus et al., 2017). While existing process models of internship participation are promising (e.g., Diambra et al., 2004; Narayanan et al., 2010), they are not designed to document the influence of specific elements of an internship experience (e.g., supervision). Nor do the models focus on processes of intern growth and development. In the model that most addresses these issues, Sweitzer and King (2013) emphasize the stages that a student goes through in an internship (anticipation, exploration, competence, and culmination), focusing on how students construct meaning from the experience, especially as they are introduced to new, and potentially jarring, sociocultural and professional contexts.

In these models, however, the programmatic factors that shape students' experiences and facilitate their growth and development remain invisible. In particular, the models overlook the nature of the tasks that students work on during their internship, and how supervisors shepherd them through this process. This is surprising, given that the nature of activity, task performance, and mentoring has been one of the most studied phenomena in the learning sciences over the last few decades (e.g., Chi & Wylie, 2014; Cobb & Bowers, 1999; Lave, 1977). One of the more influential theories of activity, developed by the Russian psychologist Lev Vygotsky (1980), was

subsequently developed into a sociocultural theory of learning (Chaiklin & Lave, 1993). Sociocultural views of learning and development focus on the social and material setting of activity, prioritizing the significance of the identities and social relationships between participants, the physical arrangements of space, tools, and bodies of the participants, and the cultural beliefs and goals that inform the setting.

One influential framework (Lave & Wenger, 1991) explicitly attends to the type of interactions that likely occur in many internships. The authors studied learning in apprenticeships, focusing on a process they called *legitimate peripheral participation*. This process involves novices and experts co-participating in complex work activities where at first the novice participates at the margins of the activity by helping the expert with tasks appropriate to their beginner skill level. Gradually, while learning through co-participation, novices acquire the skills and confidence to take over more central tasks. Over time, and with appropriate coaching, the novice's identity itself transitions to that of a more experienced practitioner, a process that has been described by scholars who study socialization of interns as they are introduced to the cultural norms and workplace practices of a profession (Gowlland, 2012; Jackson, 2017). In a rare analysis of work-based learning using a sociocultural lens, Guile and Young (1998) argue that learning in apprenticeships needs to shift from an individualistic focus of learning that involves experts "transmitting" de-contextualized facts and behaviors to the apprentice, to the analysis of the contexts and situations in which "pedagogic structures (…) are embedded within workplace activity" (p. 186). This shift from an individualistic approach toward a situational approach to sociocultural learning should also be accompanied by a complementary analysis of how identity and demographic factors, such as race, gender, and social class can impact the social context of the internship in ways that influence learning and development.

In the remainder of this paper we examine the impacts of sociostructural elements of internship programs on student experiences, with a focus on the ways that tasks, activities, and supervision influence student outcomes. After presenting and interpreting the data, we conclude with a discussion on the contributions of our findings to the literature, and present a new conceptual framework that emphasizes the crucial role that supervisors play in introducing students to new professional cultures, practices, and communities.

Methods

The sequential mixed methods approach in this study allows for the complementary use of both qualitative and quantitative data while also using results from the analysis of one dataset (i.e., survey data) to inform subsequent analyses of the other (i.e., focus group data) (Creswell, 2014; Teddlie & Tashakkori, 2010). Thus, the research questions guiding the study are: RQ1. How, if at all, are structural features associated with student outcomes? Survey results addressing RQ1 indicated the importance of supervision and mentoring, which is the basis for the second research question, investigated through an analysis of the qualitative focus group data: RQ2. How do students characterize the nature of effective mentoring and supervision?

Our goal was to document internship experiences at a variety of institution types and locations across the U.S. The data for our study were collected at five institutions that reflected both institutional and geographic diversity. These institutions included one technical college in Wisconsin (Institution A); one Historically Black College or University (HBCU) in South Carolina (Institution B); and three comprehensive universities—two in Wisconsin (Institutions C and D) and one in Maryland (Institution E). While these five institutions do not reflect the entire spectrum of institutional and geographic diversity in U.S. higher education, they satisfied our goal of capturing student experiences outside of elite Predominantly White Institutions, which are sometimes the sole subject of research on college internships.

The sampling frame for the study included students in the second half of their degree programs (Institution A), or in their junior and senior years (Institutions B, C, D and E), to increase the prospects that students had opportunities to conduct an internship. We also excluded from the sampling frame students from programs with a required clinical practicum (e.g., teacher education or nursing practicums) or apprenticeship programs. Due to resource constraints, we capped the size of the study sample at each institution at 1,250 students, using random stratified sampling method based on two strata: gender and race. For Institution B, which had only 885 juniors and seniors in total, we used the entire sample population.

Data Collection Procedures

Survey

The procedure for administering the online survey began with a letter and cash incentive ($5) mailed to 5,885 students: 1,250 at Institution A; 885 at Institution B; 1,250 at Institution C; 1,250 at Institution D; and 1,250 at Institution E. A total of 1,548 students completed the survey for a total response rate of 26.30%, with 228 respondents (18.24% response rate) at Institution A; 198 respondents (22.37%) at Institution B; 385 respondents (30.72%) at Institution C; 516 respondents (41.28%) at Institution D; and 221 (17.68%) respondents at Institution E. The current study focuses on the 488 (31.52%) students who reported an internship experience, and among whom 435 students provided full demographic information for further data analyses. Table 1 presents demographic information of the 435 students included in this analysis, who interned in a wide array of industries.

The survey asked whether or not students 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 was field-tested with a group of career advisors and experiential learning professionals prior to data collection.

Table 1: **Descriptive Statistics of Student Characteristics and Internship Program Features**

Student Characteristics and Internship Program Features		Survey		Interview	
		n=435	%	*n*=52	%
Gender	Female	296	0.68	32	.62
	Male	139	0.32	20	.38
Race	Asian or Asian American	25	0.06	3	.06
	Black or African American	105	0.24	17	.33
	Hispanic or Latino	25	0.06	4	.08
	White or Caucasian	280	0.64	27	.52
First-generation status	Continuing-generation students	270	0.62	32	.62
	First-generation students	165	0.38	20	.39
Institution types	4-year comprehensive universities	262	0.60	33	.64
	HBCU	78	0.18	12	.23
	Technical colleges	95	0.22	7	.14
Industry	Agriculture	13	0.03	2	.04
	Construction	12	0.03	1	.02
	Education and Health Services	108	0.25	14	.27
	Financial Activities	37	0.09	5	.10
	Information	35	0.08	5	.10
	Leisure and Hospitality	39	0.09	0	.00
	Manufacturing	24	0.06	3	.06
	Other Services	71	0.16	9	.18
	Professional and Business Services	60	0.14	10	.19
	Public Administration	20	0.05	3	.06
	Retail Trade	16	0.04	0	.00
Internship payment	Paid	280	0.64	34	.65
	Unpaid	155	0.36	18	.35
Internship requirement	Not required	211	0.49	31	.60
	Required	224	0.52	19	.37
Annual income (6 levels)	0 ~ $2,999	77	0.18	13	.25
	$3,000 ~ $7,999	95	0.22	11	.21
	$8,000 ~ $12,999	98	0.23	16	.31
	$13,000 ~ $17,999	54	0.12	5	.10
	$18,000 ~ $22,999	35	0.08	3	.06
	above $23,000	76	0.18	2	.04
		Mean	**SD**		
Age		25.49	7.14	27.94	8.34
Annual income		3.24	1.70	2.63	1.36
Internship duration (in weeks)		15.97	10.88	14.92	10.21
Supervisor support		4.25	0.84	4.27	0.76
Mentoring		3.38	0.86	3.47	0.83
Goal/task clarity		3.87	0.92	3.86	0.93
Autonomy		4.01	0.93	4.09	0.93
Academic relatedness		3.99	1.03	4.02	1.08
Internship satisfaction		4.00	0.96	3.87	1.00
Developmental values		4.11	0.96	4.23	0.72
Career adaptability (total)		3.80	0.63	3.84	0.64

Note. HBCU: historically black colleges and universities; SD: standard deviation.

Dependent Variables. We included three dependent variables that are commonly used in the internship literature, with a focus on measures that captured aspects of student development. First, *intern satisfaction* (McHugh, 2017) was measured by one item asking about the interns' level of satisfaction with their internship, using a five-point Likert scale ranging from one (not at all satisfied) to five (extremely satisfied). The second dependent variable was the *perceived developmental value of internships*, which was measured by a three-item scale (Beenen & Rousseau, 2010; McHugh, 2017) that captures the degree to which respondents considered their internship to be valuable for their career development, useful for clarifying their career objectives, and also a venue for learning new skills and information. Study participants rated the three questions using a five-point Likert scale ranging from one (not at all) to five (a great deal), with a Cronbach's alpha of 0.82. The third outcome measure was *career adaptability*, a psychosocial construct that refers to an individuals' resources for handling current and future career challenges and changes. This construct ultimately influences how well students integrate into their social and professional environments (Porfeli & Savickas, 2012). Career adaptability is measured via the 24-item Career Adapt-Abilities Inventory (CAAS) that included the four subscales of concern (i.e., extent to which employees are future oriented), control (i.e., extent to which employees take responsibility for their futures), curiosity (i.e., extent to which employees explore future opportunities), and confidence (i.e., employees' beliefs that they can turn goals into reality). The Cronbach's alphas of the four subscales ranged from 0.85 to 0.89.

Independent Variables. Five independent variables were included in the survey and subsequent analyses. *Supervisor support* (McHugh, 2017; Shanock & Eisenberger, 2006) is a four-item scale used to assess the extent to which internship supervisors care about interns' well-being and satisfaction at work. It is measured with a five-point Likert scale and a Cronbach's alpha of .90. *Supervisor mentoring* (McHugh, 2017) is a five-item scale that measures the quality of supervisors' mentoring of interns with specific strategies for achieving career goals, using a five-point Likert scale and a Cronbach's alpha of 0.83. *Goal clarity* refers to the extent to which a supervisor provides clear objectives and explanations of the interns' tasks, and is measured by a two-item scale using a five-point Likert scale and a Cronbach's alpha of 0.89 (Beenen & Rousseau, 2010; McHugh, 2017). *Autonomy* (McHugh 2017) is a two-item scale that measures the degree of flexibility and freedom of the intern to complete work during the internship. Participating students rated the two questions using a five-point Likert scale ranging from one (none) to five (a great deal). The Cronbach's alpha using the current sample was 0.76. Finally, in order to measure the *relatedness between students' academic program and internships*, one item asks subjects to indicate the degree to which their internship was related to their academic program, using a five-point Likert scale from one (not at all related) to five (extremely related) (McHugh, 2017).

Control Variables. Some demographic information was collected as control variables, namely, gender (female vs male), age, race (i.e., Asian, Latino, Black, and White), first-generation college student or not, annual income (measured by asking participates their annual income received from their main job(s), with the answer sorted by six levels, namely, 0 ~ $2,999 = 1; $3,000 ~ $7,999 = 2; $8,000 ~ $12,999 = 3; $13,000 ~ $17,999 = 4; $18,000 ~ $22,999 = 5;

$23,000 ~ = 6), institution type (4-year university, historically black college or university, and vocational and technical college), compensation (paid vs unpaid), and duration (i.e., per week).

Focus Groups. After completing the survey, the students were asked if they were willing to participate in a focus group. A total of 52 students participated in focus groups; attendees received $20. Most focus groups included two to four students, though no-shows resulted in one-person interviews in some cases ($n = 7$). Focus group sessions lasted about one hour and were moderated by one to two researchers who used a semi-structured protocol that included questions about students' background, their academic program, motivations for pursuing an internship, the nature of their work in the internship, the type of mentorship they received in their internship, and so on.

Data Analyses

Statistical Analyses of Survey Data

The quantitative analysis was conducted using R statistical analysis software (R Core Team, 2018). Prior to analyzing the data, we adopted multiple imputation (MI) to clean missing values. After an initial scanning, we found that there were three numeric variables (i.e., internship duration per week, annual income, and mean of autonomy) that had missing values, with the missing rate ranging from 0.22% to 8.39%. Therefore, we used MI approach rather than a listwise deletion procedure to avoid losing valuable information and reducing analysis power (Cheema, 2014). Five imputations were required, so that five datasets with plausible values replacing the missing values were generated, which were later used for further regression analyses.

We conducted a two-step linear regression analysis to examine the amount of variance in students' satisfaction, developmental value, and career adaptability that can be explained by student characteristics and program-related factors. For both models of satisfaction and developmental value, a block of student characteristics was entered as control variables in model one, including age, gender, race, first-generation status, annual income, and institution. The equation of the linear regression is shown as:

$$Y_1 = \beta_0 + \beta_{age} + \beta_{gender_{male}} + \beta_{race_{Asian}} + \beta_{race_{Latino}} + \beta_{race_{White}} + \beta_{first-generation\ college\ students} + \beta_{annual\ income} + \beta_{institution_{HSBC}} + \beta_{institution_{technical\_college}} + \in$$

Then, internship program-specific characteristics were added as a second block of variables to the second model. This is demonstrated in the equation:

$$Y_2 = \beta_0 + \beta_{age} + \beta_{gender_{male}} + \beta_{race_{Asian}} + \beta_{race_{Latino}} + \beta_{race_{White}} + \beta_{first-generation\ college\ students} + \beta_{annual\ income} + \beta_{institution_{HSBC}} + \beta_{institution_{technical\_college}} + \beta_{internship\ requirement} + \beta_{internship\ unpaid} +$$

$$\beta_{internship\ duration} + \beta_{supervisor\ support} + \beta_{supervisor\ mentoring} + \beta_{goal\ clarity} + \beta_{autonomy} + \beta_{relation\ to\ acadeimc\ program} + \in$$

This approach allowed us to report the level of significance for each individual independent variable and to determine the change in R^2 created by the second block of variables. Finally, we conducted an F test to evaluate whether there was a significant improvement of the second model, compared with the first model, after adding the variables of program features.

Focus Group Analysis

Focus group transcripts were analyzed in MaxQDA software to address RQ2 on students' accounts of the nature of effective mentoring and supervision. The first step involved two researchers who reviewed the focus group protocol and then coded two transcripts in parallel, reconciling the few discrepancies, whereupon the remainder of the interviews were segmented by one researcher (Campbell et al., 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, 2014). Additionally, researchers coded deductively for constructs identified in the literature (e.g., student comments on the importance of supervisor support in their internship). 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. A closer analysis of these data, with a focus on discerning conceptual similarities and/or clustering between and among themes, based on techniques for such coding called second-cycle or axial coding (Saldaña, 2015), led to the identification of five categories of intern-supervisor relations that are constituents of the iterative, dynamic, ongoing process of the intern-supervisor relationship.

Limitations

Some limitations to the study should be considered when interpreting the data reported in the next section of this paper. First, as a cross-sectional study, it is not possible to draw causal conclusions about the relationship between internship program structure and outcomes. Future researchers could conduct longitudinal and experimental studies to better understand the potential causal relationships between and among these variables. Second, in this study we used a single item for the measure of internship satisfaction. While this is not an uncommon approach in the research literature (e.g., McHugh, 2017), it is preferable to develop multi-item scales for constructs such as satisfaction. With these limitations in mind, we now turn to the results of the study, which contribute to the existing literature on internships by exploring the relationships between internship program structure and student outcomes in a large and diverse sample of college and university students.

Results

RQ1: How, if at all, are structural features associated with student outcomes?

The data reported in Table 1 provide insights into student characteristics of interns as well as the nature and structural features of the internship programs reported by students in our study. For instance, the average duration of an internship was approximately 16 weeks. Supervisor support had a mean (M) of 4.25 with a standard deviation (SD) of 0.84, which indicates that students felt their supervisors exhibited care and respect for their work "quite a bit." Supervisor mentoring was rated as (M = 3.38, SD = 0.86), which indicates that students reported that their supervisors provided mentoring behaviors such as suggesting new strategies or providing feedback only "sometimes." Other details regarding program structure in the data include the degree (i.e., "somewhat clear" to "very clear") of task clarity provided by intern supervisors (M = 3.87, SD = 0.92), the degree of intern autonomy (i.e., "quite a bit") (M = 4.01, SD = 0.93), and the relationship of the internship to students' academic coursework (i.e., "very related") (M = 3.99, SD = 1.03). These results add to existing evidence about the structural features of internship programs (e.g., D'abate et al., 2009; McHugh, 2017).

Table 2 demonstrates the correlations among key continuous variables that are included in the multiple regression analysis. The correlation results suggest that program features (i.e., supervisor support, supervisor mentoring, goal clarity, autonomy, and academic relatedness) are all significantly associated with each other as well as with the three outcome measures respectively (i.e., internship satisfaction, perceived developmental value, and career adaptability), with coefficients ranging from .12 to .60. This indicated a low risk of multicollinearity (Dohoo et al., 1997). Tests of variance inflation factor (VIF) also indicated that multicollinearity is not a concern, with VIF scores ranging from 1.03 to 1.55 (Vatcheva et al., 2016).

Table 2. **Correlations Among Internship Program Features (n = 435)**

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Age												
2. Annual income[a]	.40***											
3. Internship payment[b]	-.11*	.00										
4. Internship requirement[c]	.15**	.14**	-.06									
5. Internship duration	-.03	.07	.06	.03								
6. Supervisor support	.04	.01	-.06	.09	.00							
7. Mentoring	-.14**	-.01	-.01	.08	.04	.64***						
8. Goal clarity	.06	.01	-.10*	.03	.04	.60***	.48***					
9. Autonomy	.01	.06	-.05	.06	.12*	.43***	.42***	.26***				
10. Academic relatedness	.10*	.04	-.10	-.05	.02	.21***	.13**	.28***	.14**			
11. Satisfaction	.02	.12*	-.03	.04	.07	.64***	.56***	.59***	.34***	.36***		
12. Developmental values	-.02	-.04	-.01	.02	.12*	.52***	.52***	.49***	.32***	.47***	.65***	
13. Career adaptability	.06	.16**	-.02	.03	-.03	.24***	.25***	.21***	.13**	.12*	.20***	.26***

Note. a. Family income includes six levels, namely, 0 ~ $2,999 = 1; $3,000 ~ $7,999 = 2; $8,000 ~ $12,999 = 3; $13,000 ~ $17,999 = 4; $18,000 ~ $22,999 = 5; above $23,000 = 6. b. Internship payment: unpaid = 1, paid = 2. c. Internship requirement: not required = 1, required = 2.
*p < .05, **p < .01, ***p < .001

Table 3 presents the results of linear regression analyses. With respect to satisfaction, only annual income was a significant control variable, but student characteristics only explained a very small percentage of the variation in satisfaction, with adjusted $R^2 = .03$. Variables that were significant (and positive) predictors of internship satisfaction included supervisor support ($\beta = .32, p < .001$), mentoring ($\beta = .20, p < .001$), task goal clarity ($\beta = .24, p < .001$), and relation to academics ($\beta = .20, p < .001$). Model 2 explains 51% more of the variation in satisfaction, with adjusted $R^2 = .54$. These results suggest that supervision support and mentoring, task goal clarity, and relation to academics are important factors associated with interns' satisfaction (see Table 3). Overall, after adding the program feature variables in Model 2, the satisfaction model was significantly improved, with $F(8, 438) = 59.81, p = 0.01$.

Table 3. **Results of Hierarchical Regression Analysis for Internship Satisfaction and Developmental Value ($n = 438$)**

	Satisfaction		Developmental Value		Career Adaptability	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Step 1: Students characteristics						
Age	-.03	-.04	-.04	-.02	-.01	-.00
Gender (reference group: female)						
Male students	-.19	-.10	-.26*	-.20*	.14	.16
Race (reference group: Black or African American):						
Race: Asian	-.21	-.03	-.17	.04	-.15	-.10
Race: Latino	.01	.06	.18	.26	-.28	-.26
Race: White	-.12	.12	-.02	-.21	-.41*	-.32
First-generation status, reference group: continuing-generation students						
First-generation students	.12	.02	.00	-.11	.36***	.33***
Institution type (reference group: 4-year comprehensive universities)						
HBCUs	.01	-.02	.12	.24	.01	-.01
Technical colleges	-.24	-.10	-.20*	-.16	.00	.07
Annual income	.11***	.08***	.07	.04	.11**	.10**
Adjusted R^2	.03		.01		.07	
Step 2: Internship Program features						
Internship required (reference group: not required)		-.01		.02		-.04
Internship being unpaid (reference group: paid)		-.10		-.13		-.04
Internship duration (in weeks)		.01		.10*		-.02
Supervisor support		.32***		.17**		.11
Supervisor mentoring		.20***		.26***		.12
Goal clarity		.24***		.13**		.04
Autonomy		.01		.03		.00
Academic relatedness		.20***		.38***		.06
Adjusted R^2		.54		.49		.12
Δ Adjusted R^2		.51		.48		.05
F test (Model 1 vs Model 2)		59.81*		50.79**		3.70**

Note. Income: six levels (0 ~ \$2,999 = 1; \$3,000 ~ \$7,999 = 2; \$8,000 ~ \$12,999 = 3; \$13,000 ~ \$17,999 = 4; \$18,000 ~ \$22,999 = 5; above \$23,000 ~ = 6).

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Regarding the developmental value of internships, results indicated that gender was a significant control variable. However, student characteristics only explained a very small percentage of the variation (1%, adjusted $R^2 = .01$) in developmental value of internships. When program features were added to this model in Step 2, internship duration per week ($\beta = .09.10097, p = .02$), supervisor support ($\beta = .17, p = .001$), supervisor mentoring ($\beta = .26, p < .001$), goal clarity ($\beta = .13, p = .004$), and relation between internship and academics ($\beta = .38, p < .001$) significantly predicted students' perceived developmental value, and all the variables explained 49% of the variation in developmental values, adjusted $R^2 = .49$. Overall, the F test showed that there was a significant improvement of the second model after adding the program feature variables, with $F(8, 438) = 50.79, p = .006$.

With respect to career adaptability, White students, first-generation students, and annual income were three significant control variables. However, student characteristics explained a small percentage of the variation in satisfaction, with adjusted $R^2 = .07$. After adding the program feature variables, no program features were significantly associated with career adaptability. Model 2 explains 12% of the variation in career adaptability, with $F(8, 438) = 3.70$, p = .008.

The key findings from analysis of our survey data indicate that overall, students had supportive relationships with their supervisors, although they reported less mentoring taking place. The correlation results suggest that the program features of supervisor support, supervisor mentoring, goal clarity, autonomy, and relation to the academic program are all significantly associated with the outcomes of satisfaction, perceived developmental value, and career adaptability. Additionally, the linear regression analysis results suggest that supervisor support, specific job-related mentoring, and goal clarity were critical factors that affects interns' internship outcomes, especially in terms of satisfaction and perceived developmental value. The close relationship between interns' academic learning and internship experience also proved to be a significant factor associated with satisfaction and developmental value. However, no program feature was identified as a significant predictor for career adaptability in the analysis. These findings indicate that supervision (including supervisor support, supervisor mentoring, and goal clarity) is a critical factor associated with student satisfaction, learning, and development within an internship.

RQ2: How do students characterize the nature of effective mentoring and supervision?

Given these findings on the importance of quality supervision for student interns, we then analyzed our qualitative data that included observations regarding supervision and mentoring from transcripts of focus groups and interviews with students ($n = 52$). The data provide a more fine-grained and detailed account of internship supervision than is available in the extant literature, where supervision is often defined by researchers (instead of grounded in student experience) and/or limited to a delimited number of survey items (e.g., National Survey of Student Engagement, 2020). Data that are both fine-grained and based on students' accounts are needed to illuminate how the features of an internship—such as supervisor-student

interactions—might contribute to desirable developmental outcomes, such as student satisfaction and career adaptability. Specifically, analysis of the data led to the identification of key elements of intern-supervisor relations.

Critical Facets of Intern-Supervisor Relations

The inductive analyses of text led to the identification of 25 distinct themes related to the quality and characteristics of internship supervision as understood and described by the interns who participated in our focus groups. A closer analysis of these data, with a focus on discerning conceptual similarities and/or clustering between and among themes based on coding techniques known as second-cycle or axial coding (Saldaña, 2015), then revealed five higher-order categories that refer to key features of intern-supervisor interactions and relations: communication of tasks; intern autonomy in the workplace; proximity and availability of supervisor; attention to intern learning; and provision of feedback. In Table 4, of the 25 distinct themes we identified, we list those reported by at least five students, grouped under the five categories that characterize intern-supervisor relations.

Table 4. **Description of Themes Related to Supervision Reported by Students (*n* = 52)**

Category of intern-supervisor relations	Theme description & (#) students reporting individual theme
1. Communication of tasks	
Clear guidance	Supervisor provides clear guidance, including specific expectations (9)
High expectations	Supervisor has high expectations for intern performance (7)
2. Intern autonomy in workplace	
Provides autonomy – positive	Supervisor gives intern independence to manage work, which intern views in positive terms (16)
Provides autonomy – negative	Supervisor gives intern independence to manage work, but without adequate communication or guidance; intern views in negative terms (9)
3. Proximity and availability of supervisor	
Availability for questions	Supervisor is available to answer questions when needed (14)
Hands-off supervision	Intern is expected to ask for help when needed, with supervisor rarely present or available (13)
Supervisor is elsewhere	Supervisor mostly works at location away from the intern (8)
Regular check-ins	Supervisor regularly checks on intern on how work is progressing (10)
4. Attention to intern learning	
Supportive environment	Supervisor helps foster a supportive work environment, including forging of interpersonal connection (5)

Category of intern-supervisor relations	Theme description & (#) students reporting individual theme
Scaffolded supervision	More supervision offered during initial onboarding, with interns gradually assuming independence and more responsibilities later (8)
Close and focused supervision of risk-associated tasks	Situations where novice interns receive a high degree of supervision because there is a degree of risk associated with the task, such as legal, financial, health and safety, or other risk. (5)
Hands-on learning	Supervisor provides opportunities for intern to learn by doing (8)
Internship as learning	Supervisor understands that internship is a learning experience, and exhibits patience and care in assigning tasks (8)
5. Provision of feedback	
Provide feedback	Supervisor regularly provides feedback on their work and performance (9)
Limited feedback	Supervisor provides little feedback, with intern unsure of their progress (6)

The five categories can be interpreted as a process of supervision grounded in specific situations and contexts, beginning with the communication of tasks and ending with the provision of feedback on the interns' performance. Next, we describe each of the five higher-order categories and provide students' descriptions of specific themes and aspects of intern-supervisor relations.

1. Communication of Tasks

Nine respondents spoke about the expectations provided by their internship supervisors, highlighting the importance of clear and explicit communication from their supervisors. This could be in the form of establishing clear instructions for how to complete a task or setting clear expectations for project outcomes. For example, one respondent described how her supervisor gave her a tour of the fire inspection firm where she was interning and clearly outlined her responsibilities for specific tasks, such as revising or "cleaning up" architectural drawings of fire safety systems. This intern also benefited from "feedback every day, good and bad," which led to her feeling that it was an overall positive learning and professional experience.

In addition, seven interns said that supervisors communicated that they had high expectations for the quality of interns' work. For example, one intern noted that the level of work and expectations for the quality of the finished product were similar to "anyone else on staff." Another stated that her supervisor communicated increased expectations for her work: "She's upped it for me simply because she wants me to stay on as a permanent employee." In these cases, the clear communication of tasks and expectations for performance provided interns with a highly structured work environment and space for learning.

2. Intern Autonomy in Workplace

In addition to the importance of clear communication from supervisors, the most discussed aspect of internship supervision included the level of autonomy and independence afforded to the intern by their supervisor. Sixteen respondents spoke positively about how supervisors assigned tasks and gave space for the intern to work through projects on their own, while also being available for feedback and guidance when needed. As one respondent described, "A lot of it was independent, and if you had questions you could go to them, but they were really cool about giving you your space and just letting you work." Another student spoke of the important relationship between the aforementioned communication of tasks and autonomy, where she was "in charge of [her projects] and I can decide however I want to do them, but they gave me the outcomes that they're looking for."

In contrast, nine respondents spoke about the autonomy and independence provided by their supervisor in negative terms. These interns often described the autonomy afforded to them in terms of an overall lack of supervision or clear guidance. For example, while describing their work in a high-stress environment, one respondent explained, "they're like, 'Hey, do this,' and I'm like, 'I don't know how to do this'… the guy expects so much." Another student described their experience with workplace autonomy at an environmental protection firm as positive with respect to the standard operating procedures of field and lab work. However, for their individual project he stated that, "I was completely on my own," and he initially struggled with his poorly laid out duties for the summer.

Overall, this finding indicates that clear communication of work tasks and expectations is an important feature of quality internship supervision—perhaps even more so in internships that allow for a degree of autonomy in work tasks.

3. Proximity and Availability of Supervisor to the Intern

The students in our study also emphasized the importance of supervisors being around and available in case questions arose with respect to their work. Fourteen respondents spoke about how their supervisor was available to answer questions when needed or connected them with other colleagues to help answer questions, which they characterized as an important feature that made their internship a positive learning experience. As one respondent explained, "If I had questions, I could always go to them … I can't really think of a situation where I ever had a question that wasn't answered within an hour."

In contrast, 13 interns described their supervisor's "hands-off approach" to supervision in negative terms. In some cases, this was a somewhat alarming experience. In one instance, the student received "no guidance" from their supervisor and was "basically dropped in the deep end" of the work and expected to thrive and succeed. In other iterations of this hands-off approach to supervision, the intern was expected to request additional work or tasks when other work was completed. One respondent described this approach, explaining, "They just kind of gave you your tasks and you kind of had to say, 'Hey, I'm done with this. What else can I do?'"

This experience left some interns desiring more regular and structured interactions with their supervisor, especially in cases where the workplace was a high-pressure environment and supervisors were busy with many different tasks. Consequently, some students appreciated supervisors who would check in regularly with them to see how work was progressing. Ten respondents spoke about checking in with their supervisor on a regular basis, whether it was multiple times per day or once every two weeks. As one respondent described, "every two weeks we would meet up and we would debrief and see where we were [at] and see how we were doing and if it was overwhelming, or if we thought that we needed to be doing more."

Overall, interns appreciated supervisors who were nearby, either physically or figuratively, and who were not only available to answer questions but would check in regularly to monitor the progress of their work. The ambiguously structured and open-ended "hands-off approach" to supervision may be particularly challenging for students who may be uninformed about the need to display initiative, seek out additional work, and embrace the "go getter" disposition of an ideal intern (Frenette, 2013).

4. Attention to Intern Learning

In our prior research where we used a freelisting method to map common phrases students used to discuss their internships, 73.5% of the participants cited "learning" as a critical element of an internship (Hora et al., 2020). In the present study, the concept of "learning" also came up in focus groups; five interns emphasized the importance of supervisors cultivating a supportive and comfortable environment where they acknowledged that interns were still learners. As part of being learners in a supportive setting, eight interns described intensive supervision and training offered at the beginning of the internship, followed by a gradual fading-out of such intense supervision, with less oversight as the intern learned and mastered their tasks (i.e., a scaffolded pedagogic structure). For example, after explaining a hands-on approach to supervision in the initial period of their internship, a respondent added, "But after time went on and I got comfortable, I'd come in and I'd work, and they'd only check in once or twice a day with all of us."

Five interns also mentioned and appreciated that they benefited from very close and focused supervision when engaging in new or challenging tasks (e.g., operating dangerous equipment, handling fragile artifacts at an archeological dig), especially at the start of the internship when they were new to the work task, and in tasks associated with some potential risk (e.g., legal, financial, or health and safety risks). As one intern at a financial firm explained, "They didn't let us go in there and ruin someone's financial future." In such cases where there were potential legal, financial, or health and safety risks related to the work, interns received close and ongoing supervision until they developed the competency to mitigate the risk.

Eight respondents also spoke about the value of opportunities for hands-on learning provided by their supervisor. In these cases, the supervisor would provide opportunities to learn by having them perform tasks that were like those of other employees, while providing support and feedback throughout the process. One respondent described their experience learning from more

senior colleagues, stating, "You would watch them do [it] initially, and then they would have you do it on your own." In these cases, supervisors exhibited an understanding that interns will grow throughout the internship and viewed mistakes as part of the learning process. Another intern who described their supervisors' approach noted, "[The supervisors] will be there for you if you fail, unlike in a real job where you'll get fired if you do something bad." This student went on to state that at their internship, "They were there to catch me obviously and mentor me on what I did and didn't do well for the project." These findings indicate that students view internships as an important learning opportunity, and that such learning can be facilitated by supervisors who cultivate a supportive learning environment, scaffold challenging new tasks, provide opportunities for hands-on learning, and explicitly understand and treat the internship as a learning experience for interns.

5. *Provision of Feedback*

Finally, nine students in our study reported the importance of receiving regular feedback on their performance from their supervisors. The frequency and quality of feedback varied by respondent. Feedback might have been offered after the completion of a specific task/project or might have been provided as part of a mid-internship assessment or review. One respondent explained, "There's feedback every day, good and bad, about what I'm doing, and especially now that I'm starting my own projects." For this student, who was interning at the fire safety firm, this feedback was critical due to the high-stakes nature of the work and because it facilitated her learning new skills and decision-making strategies.

In contrast, six interns stated that their supervisors provided only limited feedback, which was frustrating for them because they felt confused and uncertain about how they had progressed over the duration of the internship, and how they could improve their performance. For one student, who worked at a multi-national firm where his supervisor was several hundred miles away, the lack of feedback and general communication was problematic given the ambiguity of assigned tasks and the fact that, "I just want to know how I'm doing in my job." Unfortunately, in some situations, interns operate in a highly unstructured pedagogic environment, where employers pay little attention to the learning and professional development of their student interns.

Discussion

Our goal in this paper is to examine the notion that internship participation will lead to positive student outcomes and professional development. We aim to recast the internship experience as a potentially complex learning process, whereby the design and structure of an internship, especially the behaviors of the job-site supervisor, play a crucial role in determining students' satisfaction and development. We address critical questions that are rarely pursued in the literature on internships: (RQ1) Which features of an internship program most impact student outcomes? and (RQ2) How do students characterize mentoring and supervision in their internships? As internships and other high-impact practices play an increasingly influential role in how colleges and universities think about the college experience and students' future careers,

with some institutions even mandating internships for graduation, postsecondary leaders and student affairs professionals will need robust evidence regarding these questions, to guide decisions about how internships should be designed and implemented.

In this discussion, we highlight key findings from the study and the contributions these data make to the literature, including the importance of student attributes (e.g., gender, first-generation status, annual income) and structural features of internship programs (e.g., task goal clarity, supervision, autonomy) on the outcomes of an internship experience. In addition, rejecting individualistic and transmissionist theories of learning, we propose a new processual model using sociocultural learning theory to consider how student identities and the nature of supervision impact student learning and development. We conclude with a discussion of the implications of these findings for research, policymaking, and educational practice.

Contributions to Research Literature on Internship Program Structure

The data reported in this paper contribute new evidence on the demographic characteristics of students that appear to influence student outcomes, the effects of structural features of internship programs on student outcomes, and new insights into the nature of supervision and learning within the pedagogic structures of an internship.

Insights Into Student Demographics and Internship Outcomes

While not a primary focus of our research questions, the data reported in this paper indicate that socioeconomic status and demographics may impact the outcomes of college internships, raising unaddressed issues of equity for internship research. Specifically, gender, race, first-generation status, annual income, and institutional affiliation all play a role in shaping student outcomes. Students with a higher level of annual income tend to report a higher level of internship satisfaction; female interns are more likely to report a higher level of developmental value; and first-generation students and students with a higher annual income were more likely to report a higher degree of career adaptability. These findings confirm calls in the literature for a greater focus on how race, gender, and social class shape internship experiences and outcomes, especially by privileging students with ample financial and social capital who can find and then pursue experiences that are often unpaid and highly competitive (Curiale, 2009; Finley & McNair, 2013).

Documentation that the positive effect of high-impact practices such as internships may be due to students' pre-existing characteristics and not necessarily the experience itself (e.g., Seifert et al., 2014), and that access to and success in internships may rely upon access to raced, gendered, and classed-based knowledge, dispositions, and resources (Curiale, 2009; Perlin, 2012), makes it clear that a focus on the impact of student demographics is critical for future research on college internships. A program of research examining internship processes and outcomes must take into account student attributes, not unlike Astin's (1991) inputs-environment-outcomes model of evaluation and assessment, and models of student development which focus on student identity and race/ethnicity (Museus et al., 2017). In particular, given the

importance of the intern-supervisor relationship to students' learning and development outcomes documented in this article and elsewhere (McHugh, 2017), we argue that more research is needed on how students' demographic background may impact the supervisory process—especially the relationships between students of color and white supervisors—and thus moderate a student's experience during the internship and subsequent outcomes.

Insights into Structural Factors

The present findings also add to existing evidence regarding the structural features of internship programs that are associated with student learning and developmental outcomes.

Supervision and Mentoring. Results showed that both supervisor support and mentoring are positively related to both internship satisfaction and perceived developmental value. Supervisor support was rated highly by students, which indicates that students felt their supervisors exhibited care and respect for their work "quite a bit." Supervisor mentoring was rated medium high, which indicates that students reported that their supervisors provided mentoring behaviors, such as suggesting new strategies or providing feedback, only "sometimes." The results confirm prior research that demonstrates the importance of effective job-site supervision and mentoring on interns' satisfaction, professional development, and even labor market outcomes (D'abate et al., 2009; Liu et al., 2011; McHugh, 2017; Mensah et al., 2020; Rose et al., 2014; Tenenbaum et al., 2014). Given that the concept of supervisor support focuses more on the psychological needs of interns such as care, well-being, appreciation and respect, while mentoring focuses more on interns' task performance and related guidance, it is not a surprise that the high degree of supervisor support documented in our study was also associated with student satisfaction and perception that the experience enhanced their professional development and career goals. However, the lower reporting of effective supervisor mentoring, and subsequent guidance for how to perform tasks according to the mentors' expectations, suggests that this may be an area for practitioners to focus on (e.g., helping employers become more effective mentors) as well as future research.

Task Goal Clarity. Task goal clarity (i.e., clarity of the work objectives) was found positively associated with internship satisfaction and developmental values, which confirms previous research indicating that feedback and task significance were related to internship satisfaction (D'abate et al., 2009). However, our results differ from McHugh's (2017) study, which suggested a non-significant relationship between goal clarity and internship satisfaction, and a negative relationship between goal clarity and developmental value for students who had participated in paid internships rather than unpaid ones. Such a result may be due to different samples as well as the characteristics of the institutions being used in different studies (i.e., three types of institutions with more diverse background in our study), but the degree to which workplace tasks are designed and then communicated with more (or less) clarity is another important feature of an internship that merits additional research in the future.

Autonomy. While some studies have found a relationship between autonomy and positive learning outcomes of internships (Feldman & Weitz, 1990; Virtanen et al., 2014), this study is

consistent with McHugh's (2017) study, which found that autonomy was not associated with either intern satisfaction or developmental value. It is possible that different academic or career fields have different expectations about the autonomy of interns, which may lead to these disparate findings. Another explanation for these conflicting findings, however, is that existing models of intern task performance that assume autonomy is a universally positive and beneficial aspect of the internship experience, are inadequate to understand or explain the nature of task autonomy within an internship. The analysis of the focus group data indicates that differences in how students experienced and appreciated high levels of work autonomy are related to the quality of the intern-supervisor relationship. Thus, for interns in our sample who had supportive relationships with their supervisors—who were available to provide advice and answer questions—autonomy in work tasks or projects was a welcome feature of their internship, associated with a sense of ownership over the work. In contrast, for interns whose supervisors had a "hands-off approach," or supervisors who were "stressed," "too busy," or otherwise unavailable, student participants tended to equate increased autonomy in work tasks with what they experienced as a lack of supervision. Thus, autonomy in some cases may be desirable while in others it may not. While this variability may also be related to the nature of the tasks at hand, especially the degree of danger or risk involved, or other explanations that could render an autonomous work situation desirable or not, our data indicate that the intern-supervisor relationship is a key factor in making this determination. This finding led to our investigation of sociocultural learning theory, which helps explain why some interns benefit from high levels of autonomy and others do not.

Impacts on Career Adaptability. The current study did not identify any significant program features associated with the psychosocial construct of career adaptability, which we speculate may be due to two constraints: 1) our study uses cross-sectional data rather than longitudinal data, and one's development or growth is hard to capture through a one-time examination; 2) our study only examines the composite career adaptability score rather than looking into the four sub-scales of concern, control, curiosity, and confidence. A recent longitudinal study using a five-wave growth mixture model (Ocampo et al., 2020), found significant and positive effects of internship participation on all four sub-scales at three time points, while students without internship experience only increased in the category of career concern. While the current analysis did not demonstrate that program features, and especially supervisor behaviors, had a significant impact on students' sense of career adaptability, the data do contribute to the literature by identifying control variables (e.g., first-generation student status, annual income) that appear to be strongly associated with this important psychosocial resource (Savickas et al., 2009). Future studies in our research group will involve a longitudinal follow-up survey of the cohort of students included in the present analysis, which will provide an opportunity to explore the potential impact of internship participation—and its constituent factors—on career adaptability over time.

Conceptualizing Student Development as Sociocultural Learning Guided by Supervisors

Internship researchers have long called for the development of conceptual frameworks that illuminate the processes whereby an internship experience enhances student growth, development, and labor market outcomes (Narayanan et al., 2010). Some existing frameworks highlight the processes that students experience as they enter a new workplace and complete their internship, such as anticipation, exploration, competence, and culmination. These developmental models, which partition the internship experiences into a hierarchy of stages, can be useful because they highlight how an interns' experience may change over time (Sweitzer & King, 2013). However, these models tend to downplay or obscure processes that are ongoing, iterative, dynamic, and cumulative—such as the intern-supervisor relationship, which features the ongoing social dynamics between the two principal actors in an internship (i.e., the intern and the supervisor). The centrality of this workplace dynamic, along with growing evidence indicating the substantial impacts a supervisor has on an interns' experience (e.g., McHugh, 2017), points to the need for the field to develop a more theoretically sound and empirically grounded view of the intern-supervisor relationship.

Consequently, we argue that any frameworks developed to better understand how internships affect student growth and development should foreground the social and situational aspects of supervisor-intern relations. Fortunately, sociocultural learning theory provides a framework that attends to these specific elements in apprenticeships, which are closely related to internships. The framework has been widely used to study learning and development in both classroom (Brown & Campione, 1994) and workplace settings (Guile & Young, 1998; Lave & Wenger, 1991). This approach requires a new way of thinking about activity in general, and about mentor-guided activity in particular, in which activity is not solely about an intern performing (and learning) a single task (e.g., digging for artifacts in an archeological dig), but instead activity is conceptualized as a complex system that implicates features of the task itself (e.g., tools, geography, the weather) and the sociocultural context (e.g., co-workers, norms for behavior, and tool use) (Goodwin, 1994). In particular, the role of the expert or mentor in these situations is not to "throw the intern into the deep end" as one of our students reported, but instead to gradually introduce novices to the norms, tasks, and routines of a workplace or profession (Lave & Wenger, 1991). This takes place first on the periphery of a task (e.g., to clean tools for an archeological dig) and then over time, with the supervisor modeling desirable techniques and ensuring that the intern is performing at an acceptable level. Thus, the intern takes on more and more autonomy, perhaps eventually even being responsible for excavating an entire section of a dig. In this way, the supervisor remains central to the activity system, but through work that is scaffolded and facilitated by the supervisor-intern interaction, the intern gradually becomes more central to the activity system, displaying competence and independence, and acquiring an identity of a novice professional.

The categories of supervisor-intern relations identified in our data—communication of tasks, level of intern autonomy, proximity and availability of supervisor, attention to intern learning, and provision of feedback—coordinate well with the process identified by the concept of

legitimate peripheral participation, which describes the value of having a guide or mentor help to introduce newcomers to acquire information about their new jobs or organizational settings (e.g., Allen et al., 2017; Ostroff & Kozlowski, 1993). Such insights into mentor-guided socialization processes offer an important alternative to conceptualizing the internship experience as a simple yes/no matter of mere participation, or of learning in an internship as the unproblematic transmission of facts and skills from mentor to student. Furthermore, a sociocultural perspective problematizes how internship work itself is structured, by viewing it not as an "innocent" or "naturally organized" venue for activity, but instead as a "pedagogic structure embedded within workplace activity" (Guile & Young, 1998, p.186), which has either been designed with care and attention, or not.

A sociocultural perspective on internship learning and development that emphasizes legitimate peripheral participation is not a one-size-fits-all model that should be adopted by all internship programs. Instead, the degree to which close supervision (with minimal legitimate participation in tasks) is maintained should vary depending on the experience level of the intern and the nature of the task situation. The less competence an intern has with the knowledge and practices of the workplace, the more they will benefit from close supervision as exemplified by the behaviors outlined above (e.g., regular check-ins). However, interns with more experience may not require such close supervision and could benefit from more autonomy. Furthermore, it is possible that in some internship situations, for example where specialized and/or dangerous machinery or other risks are involved, close supervision is more important than in other workplaces, underscoring the importance of tailoring supervision to fit the unique needs and situations of the task, the intern, and the employer.

With these concepts in mind, we interpret the findings on supervision and mentoring in terms of their appropriateness and efficacy, depending on students' levels of experience as well as the professional context in which the internship takes place. Consequently, we posit that our findings can be interpreted along two continua: students' higher or lower levels of experience (and workplace context), and the greater or lesser importance of close, proximal supervision. The appropriateness of the combinations between experience and supervision depend on the specific context of an internship. In addition, a supervisor ideally will be able and willing to explicitly introduce the student to the cultural practices of the profession, such as norms for communicating, collaborating, and problem-solving at an archeological dig, so that the introduction to the culture of the profession is not left to chance.

Implications for Research, Policy and Educational Practice

We recommend that employers and supervisors design internships with careful attention to culture, student experience, and appropriate supervision. While this may seem like a lot to ask, we contend that only by doing so will the potential of internships as a form of experiential learning be fully realized. In fact, McHugh (2017) has stated that "for institutions that encourage and/or require internships, screening internship providers in terms of their supervisory commitment is warranted" (p. 377); this position is echoed by the experience of career services professionals, who emphasize that not all internships are "high impact," and that the ability of

supervisors to craft a rich and personalized learning experience is a critical feature of a successful internship (O'Neill, 2010). Consequently, one of the priority areas for future internship research should be to answer questions such as: What types of training should be required for internship supervisors? What are the characteristics of impactful remote internships? How, if at all, do issues of discrimination, bias, or outright racism manifest in relationships between students of color and supervisors from different racial or ethnic groups?

The data reported in this paper underscore how important it is for higher education professionals and policymakers to view internships as spaces for student learning and professional growth that are as challenging to design as a new academic program or course. We must not regard students' experiences in these programs as simply a "yes/no" box to mark on their resume, or as part of an institutions' strategic plan, with little attention to issues of program structure, the quality of supervision, or task quality. We should allocate sufficient resources to career services, employer relations units, and academic departments that directly coordinate internship programs for their students. Until and unless this happens, the potential of internships to be a truly high-impact practice will remain unrealized for thousands of college students who could benefit from these potentially transformative, work-based learning experiences.

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