Results from the College Internship Study at Madison College

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The College Internship Study

EXECUTIVE SUMMARY

This report includes preliminary findings from the first round of data collection for *The College Internship Study*, which is a mixed-methods longitudinal study of internship programs at Madison College. The study includes an online survey of students in the second half of their academic programs (n=395), focus groups with students who have and who have not had an internship experience (n=14), and interviews with career advisors and faculty (n=12), and area employers (n=18) involved in internship program administration. The first stage of data collection occurred in the Spring of 2018, which will be followed by a second round of data collection after one year.

The research questions guiding this study focus on how stakeholders conceptualize the idea of internships, participation rates by certain demographic characteristics, and the relationship between internship program structure and student outcomes. Some key findings from our analysis of the data include:

- While students, educators, and employers agreed that terms such as "learning" and "experience" capture the idea of an internship, students were unique in reporting "unpaid" and "exploration," thus signifying the importance of career exploration and compensation;
- Twenty seven percent of the respondents of our survey had participated in an internship program within the past year (n=106);
- For these students, 71% of them reported that internship is not required to graduate, and only 11% of the students reported that internship is required to graduate from their academic program;
- Participation in internships was not correlated with many of the demographic variables measured in our survey, such as first-generation or disability status. However, students with a higher GPA and those whose main job provides career-related skills were more likely to have participated in an internship;
- Barriers to participation in internships included having a job (57%) and a heavy course load (45%). Focus group participants also reported that needing to earn money was a key factor in their decision to not pursue an unpaid internship;
- Several features of internship program structure are strongly associated with college students' satisfaction and their perception that the internship helped to develop their personal career goals, including: the quality of supervisor support, the presence of supervisor mentoring, the goal clarity of work tasks, task similarity to entry-level jobs, and the amount of the intern's autonomy in performing their work;
- While outcomes such as employment status and wages will be studied over the next 12 months, near-term outcomes of participating in an internship program include the opportunity to gain real-world experience and socialization into a profession, to explore oneself and one's career interests, to cultivate professional networks, and to obtain post-graduation employment.

This report concludes with recommendations for specific steps that students, faculty and staff at Madison College, employers and policymakers can take to increase participation rates, access, and program quality for internship programs in the Madison area.

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ACKNOWLEDGEMENTS

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I. INTRODUCTION: Why study college internships?

Internships are widely perceived as important co-curricular experiences that can enhance student learning and facilitate their transition to the workforce. Advocates argue that through internships, students can develop new skills and abilities by transferring academic knowledge to real-world tasks, explore different career options, develop new professional networks and even obtain full-time employment. At the same time, employers can use internship programs to develop a pipeline of new recruits that can be vetted on the job for future employment, and postsecondary institutions can increase their students' career prospects and real-world experiences. Given these potential outcomes, internships are often described as a "win-win-win" situation for higher education, employers, and students themselves.

However, the research literature clearly indicates that internships are neither easy to design and implement, nor are they a panacea for the long-standing problems of cultivating students' skills and easing their entry into the labor market (Hora, Wolfgram, & Thompson, 2017). Access to internships themselves can be difficult, particularly for low-income, first-generation students who may be unable to engage in unpaid labor and/or lack social networks that facilitate participation in internship programs. Furthermore, while internships can provide a rich, experiential learning opportunity for students, long promoted by education theorists and learning scientists (e.g., Dewey, 1938; Resnick, 1987), designing a robust learning experience within an internship is much easier said than done. Not all internship experiences are designed and implemented with attention to best practices in the field, which could be due to a lack of knowledge about internships, adequate human and financial resources, or institutional capacity and supervisory expertise at both the college or job-site.

Despite these challenges of access and program quality, policymakers and educators view internships as a potentially important and influential component of students' education and career development. But before the potential of internships can be fully realized, it is necessary to first document the current state-of-affairs at the institutional level, so that future planning can be based on rigorous evidence. For instance, data on student participation and experiences with internships as well as the perspectives of career services staff, faculty and employers can be used to: (1) identify strengths and weaknesses in current programming, (2) establish a baseline for long-term analysis of program quality and impacts, and (3) inform decision-making about future program development and resource allocation.

In early 2018, the Center for Research on College-Workforce Transitions (CCWT) at University of Wisconsin-Madison launched *The College Internship Study* as a translational research program that could provide key stakeholders with robust, actionable evidence about internship programs. Since in-depth data on internships tend to be difficult to access, our aim in this study is to provide institutional leaders, faculty, and career services professionals at Madison College with rigorous data on issues related to internship program access and quality. In doing so, we place students' experiences and perspectives at the heart of the analysis while also attending to the critical issue of institutional capacity—two considerations that should guide decision-making about future policy and practice around internship programs.

II. BACKGROUND: What does the research literature say about internships?

An extensive body of research exists on college internships across a variety of disciplines and countries, leading to a literature that is simultaneously robust and inconsistent (Hora, Wolfgram, & Thompson, 2017). One of the biggest challenges facing the field of internship research is the lack of clear and standardized definitions regarding internships in general, and the paucity of empirical research on the structure of internship programs themselves. Given their similarity with other co-curricular experiences like coops or practicums and the variability in internship program design with respect to factors such as duration and task quality, in many studies it is highly unlikely that study participants are answering questions about their internships with a similar frame of reference in mind. Furthermore, before claiming causal relations between particular programs and student outcomes, it is essential to first describe these variables and the mechanisms that may govern their relations (Loeb et al., 2017). Consequently, descriptive research on critical mediating factors such as "the structure and format of internships" is essential in order to avoid treating the internship experience like a "black box" that mysteriously transforms students into work-ready individuals (Silva et al, 2016, p. 704).

In our study, we build upon promising lines of inquiry that examine specific features of internship program structure such as compensation, quality of supervision, and task clarity. For instance, studies on the coordination between employers and academic programs have shown that the more internships are clearly coordinated with academic coursework, the more students will gain from the overall experience (Katula & Threnhauser, 1999; Narayanan, Olk, & Fukami, 2010). Another important factor in perceived internship quality and efficacy is the behavior of job-site supervisors. Active and meaningful supervisor support was found to positively impact business students' satisfaction with the internship experience (D'abate, Youndt, & Wenzel, 2009), and was also positively associated with job pursuit, satisfaction, and career development in a study of 99 students in an undergraduate management program (McHugh, 2016). Other program design features that have been associated with satisfaction and other student outcomes include the duration of internships (Murphy, Merritt, & Gibbons, 2013), the degree of student autonomy to design and perform tasks (Virtanen, Tynjala & Etelapelto, 2014), the clarity and variety of work tasks (Bauer et al., 2007; Beenen & Rousseau, 2010), and the presence of detailed feedback from both educators and employers (Rothman, 2007).

With respect to outcome measures, some of the most common effects of internship participation examined in the literature is that of students' employment status, employer demand, or students' perceived readiness to enter the labor market (e.g., Jung & Lee, 2017; Nunley, Pugh, Romero, & Seals, 2010; Weible & McClure, 2011). While these long-term outcomes of internships are important, another effect of experiential and work-based learning is the development of students' psychological resilience and self-concept (Callanan & Benzing, 2004; Paulson & Eugene Baker, 1999; Taylor, 1988). A concept in vocational psychology that is particularly salient for college students in a labor market that increasingly features short-term contract work and frequent job switching is that of career adaptability, or the psychosocial capacity and skills to continuously adapt, persist, and self-manage one's career tasks, transitions and personal traumas (Savickas, 1997, 2005), which is the a psychosocial variable examined in our study.

Finally, career advisors and postsecondary educators are increasingly concerned about the problem of access, particularly for low-income, first-generation students who may be unable to engage in unpaid labor and/or lack transportation, child-care, or social networks that facilitate participation on internship programs (Curiale, 2009; Finley & McNair, 2013; Perlin 2012). Additionally, internship opportunities in rural areas and for students in certain fields (e.g., arts and humanities) may be limited, further exacerbating the access problem that may afflict students in many or our nation's colleges and universities.

The data reported here represent the first phase of data collection at Madison College (Time 1). Data will also be collected in the Spring of 2019 (Time 2), and will include a follow-up survey of students who responded to the T1 survey, which will represent a panel of students to track as they enter the workforce. Interviews will also be conducted with a sub-sample of these students, and also educators and employers in order to assess the nature of internship programming and/or effects over time.

III. METHODOLOGY

The College Internship Study is a mixed-methods longitudinal study of internship programs that is guided by the following research questions: (1) How do students, educators, and employers conceptualize the idea of an "internship"? (2) Does participation in internships vary by students' race, major, or socio-economic status? And, (3) To what degree are characteristics of internship programs associated with student satisfaction and students' perception of the value of the internship for their own career development?

The data collected for the study include an online survey of students in the second half of their academic programs, focus groups with students who have and who have not had an internship experience, interviews with individuals (e.g., career advisors, faculty, and area employers) involved in internship program administration and implementation and documents and online resources about internship programs and services at the institution. A team of trained researchers collected this data at Madison College in the Spring of 2018. The online survey was administered to 1,250 students in the second half of their program (with the exception of students in clinical, nursing and liberal arts transfer programs), and 395 responded (Response Rate = 31.6%). The survey included questions about student demographics, characteristics of internship programs, barriers to internship participation, and students' career adaptability (i.e., a psychological construct linked to positive vocational outcomes). 114 students agreed to be contacted to participate in a focus group. A total of 14 students were able to be scheduled and to participate in a focus group, which lasted approximately 45 minutes and included between 2 and 3 students in each group. The focus groups included more in-depth questions about experiences with and barriers to internships. In addition, 7 educators, 5 career advisors, and 18 employers from 11 firms participated in hour-long interviews regarding their own experiences administering internships (see Table 1).

Table 1: Description of Spring 2018 sample

	Survey	Focus Groups	Interviews
Students	395	6 (n=14 individuals)	N/A
Educators	N/A	N/A	12
Faculty/instructors	N/A	N/A	7
Career advisors	N/A	N/A	5
Employers	N/A	N/A	11 firms (n=18 individuals)

Table 2: Description of survey sample

	Survey Sample	Institutional Population
Total	N=395	N=1,989
Gender	Male= 171 (44%) Female= 211 (55%)	Male= 1035 (52%) Female= 954 (48%)
Race	Asian= 31 (8%) Black= 19 (5%) Hispanic= 18 (5%) White= 312 (80%)	Asian= 112 (6%) Black= 106 (5%) Hispanic= 160 (8%) White= 1490 (75%)
1st gen status	Yes= 110 (39%) No= 276 (61%)	Yes=N/A No=N/A

These data were analyzed using a variety of techniques, including inductive theme analysis of interview and focus group transcripts, saliency analysis of free-list terms, descriptive analyses of survey responses, chi-square testing and simple linear regression analyses of survey data. In our study we advance no claims of causality among internship program participation and/or design features and student outcomes, but instead provide the type of descriptive research that must precede such empirical research and explore associations among these variables (Loeb et al, 2017). A more detailed description of our research methodology is included at Appendix A of this report.

IV. RESULTS: Institutional capacity and procedures for administering internship programs

One of the goals of our research was to map the institutional routines in place regarding how internship programs are designed, implemented, and monitored. This kind of diagnostic assessment provides a "road map" of the five Ws—where, who, what, when, and why—of a program or initiative. Without such information at hand, it is difficult to ascertain precisely how programs like internships function within a complex organization, what (if any) kinds of mechanisms may be at work in shaping student outcomes, and where strengths and weaknesses exist that could be addressed in future programming. In the case of internship programs, which are often not administered through a centralized unit (e.g., a single career services office) but are managed by multiple parties across (and even outside of) campus, this type of diagnostic mapping is even more important. At Madison College we collected information on these issues from interviews with faculty and advisors, along with an analysis of online and hard-copy documents.

Are internships required to graduate from Madison College?

In many cases, academic programs at Madison College require students to take an internship to graduate. The Career and Employment Services (CES) department has compiled an institutional survey of internship and other work based learning opportunities on campus called the Madison College Internship Environmental Scan—Findings, Promising Practices and Toolkit Discussion. The document reports 41 out of approximately 140 programs require an internship to graduate, and eight offer internships as an elective. Many of the programs that require internships are housed in the School of Business and Applied Arts, such as Court Reporting, Paralegal, and Meeting and Event Management. In other cases, programs offer internships as an elective, such as Accounting, Hotel and Restaurant Management, and Interior Design, but these programs do not require an internship for graduation.

Who is in charge of administering internship programs?

Internship programing at Madison College is fairly decentralized across the institution, with internships supported

by the advisors in Career and Employment Services, but also by individual faculty within academic departments and programs. General career development support for students is provided by the Center Director and seven full-time career advisors and five part-time advisors located in Career and Employment Services. The CES department reports 578 student appointments in the last quarter (7/1-9/27/2018), but this does not capture a larger portion of their service such as classroom presentations and career event support. In addition to the support provided by CES, most internsihp programs are facilitated by faculty and department administratives across campus who coordinate for credit internships for their students.

What is involved in the administration of internship programs?

Staff in Career and Employment Services conduct resume reviews and interview coaching, and collaborate with students, faculty and employers to identify potential internship opportunities. Advisors also support student internships by giving career development presentations in internship courses offered by faculty, and by sponsoring an internship recruitment fair on campus. Advisors and faculty are both heavily involved in the process of cultivating relationships with employers for the purposes of identifying internship hosts. In some cases, they match students with particular employers, and in other cases, they compile lists of potential internship opportunities for students to pursue.

Faculty in programs with an internship requirement and/or course are also involved in a number of coordination activities with the student and the internship supervisor. This type of coordination can involve educating and formalizing an agreement on the expectations of the internship between the student, supervisor, and faculty, midterm or more frequent check-in meetings and a final end-of-internship evaluation meeting with the student and/or supervisor, and assigning and evaluating reflective writing assignments for the student to process their experience.

When do these activities take place?

While some fields tend to have a typical timing for internships during the academic year (e.g., accounting internships tend to be during tax season) others find that they have interns participating year-round. One faculty member in the Fashion Marketing program explained that "we can't tell an employer when they should have their time and money...," so the timing of internships has to be responsive to employer resources and needs. Large employers such as American Family Insurance conduct their internship programs during the summer. There is also variation in the timing of internships during the academic program, either midway through the program (e.g., the Veterinary Technician), or near the end of the program (e.g., the IT programs), which is for some students concluded just prior to graduation.

Why are personnel and organizational units involved in internship programs?

Many of the faculty and advisors who we interviewed for this study viewed their efforts to facilitate student internship experiences as an important and central aspect of their work. For example, one faculty member explained that since most of the students are returning to education to change or advance their careers, this motivated her to support students through internships, "It's that I just feel like [internships are] where the rubber meets the road. That's where I can provide value to them [the students]." Career advisors and faculty often described their motivation to support student internships in terms of the value the experience can provide to students, including helping students to make connections in their field, become excited about their career and motivated to finish the program, expand their skills, and, as one faculty explained, "it's about [our students] jumping feet first in and getting some experience," in particular, by obtaining experience in an industry that is related to their career goals. Instructors also support student internships through credited internship courses which students can take concurrently with their placement. Internships courses facilitate and assess the students' internship experiences, often through career development workshops, classroom discussions with peers, and written reflection assignments, presentations, and projects."

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* For the academic year of 2017-2018, 508 Madison College students passed their internship courses and completed a work experience with a grade C or above (123 students in Fall 2017, 246 students in Spring 2018, and 139 students in Summer 2018).

V. RESULTS: How do students, educators, and employers conceptualize the idea of an "internship"?

One of the findings from our review of the research literature on college internships was that the term is used to describe a variety of different programs and experiences, such that a standardized definition of the term did not exist in policy, research or practice. Most commonly, the term wasn't defined at all in the literature and instead was presented as if a common understanding of the program's characteristics were known to all. Besides terminological confusion that inhibits comparability across studies, however, is the related issue of not knowing what different parties think about when they hear the term, or what cultural anthropologists call a "cultural domain" (Borgatti, 1994).

Focus group and interview results: What do "internships" mean to different people?

In our study, we sought to document the specific ideas and phrases that students, educators and employers associated with the term "internships," which sheds light on the assumptions and associations that social groups attach to an idea or phrase. These data were collected at the beginning of focus groups with students, and interviews with educators and employers.

Table 3. Free-list results for term "internship" for students, educators, and employers of Madison College.

Students (n=14)		Educators (n=12)		Employers (n=18)	
Term	Salience	Term	Salience	Term	Salience
Learning	0.62	Experience	0.511	Learning	0.368
Experience	0.452	Mentorship	0.463	Mentorship	0.367
Unpaid	0.260	Connections	0.441	Development	0.224
Exploration	0.229	Development	0.424	Intern qualities	0.210
Connections	0.195	Practical Application	0.255	Experience	0.205
Temporary	0.193	Learning	0.246	College	0.167
Development	0.145	Advancement	0.229	Benefits to employer	0.145
Career	0.143	Real world	0.222	Positive	0.144
Opportunity	0.136	College	0.133	Real world	0.139
Mentorship	0.127	Internship tasks	0.117	Exploration	0.139
Low-value work	0.127	Exploration	0.109	Internship tasks	0.097

Table 3 illustrates the most salient associations that students, educators, and employers at Madison College had with the word internship. On one hand, educators seemed to approach internships as opportunities for students to gain

experience, receive mentorship and networking opportunities, and apply their knowledge from the classroom into the real world, and employers focused on interns' learning and the company's mentorship. On the other hand, students approached the topic from two directions: although learning, experience, exploration and development of internships was salient to them, so was the unpaid, temporary, low-value-ness of internships.

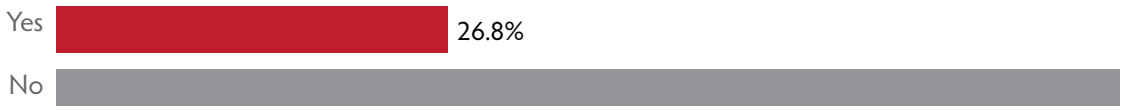
VI. RESULTS: Which students are taking internships at Madison College?

In this section we present findings from the online survey and student focus groups regarding the number of students at Madison College who have (and have not) participated in internships.

Survey results: How many students are participating in internships?

One of the most fundamental questions facing research, policy, and practice on college internships is how many students are participating in these programs. Among our study sample (N=395) we found that 27% took an internship in the past 12 months, with most students (93%) in this group having had at least one internship experience (see Figure 1).

Figure 1. In the past 12 months, have you participated in an internship?



N = 395. Number of observations by category: Yes = 106; No = 289.

These results indicate that a large number—approximately three-quarters —have not had an internship experience, indicating that it is possible to substantially grow internship participation at Madison College.

Survey results: Are there any demographic, life circumstance, psychological, or program characteristics that are associated with participation and non-participation in internship programs?

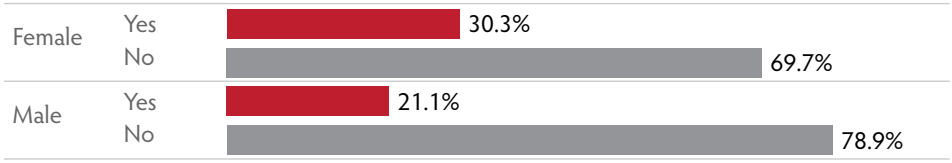
A wide range of factors may explain why a student elects to take an internship (or not), and understanding these forces is essential for institutional stakeholders who aim to improve access to these workplace learning experiences. In this section we report findings regarding differences in internship participation according to three categories: demographic variables (I.e., gender, race/ethnicity, first-generation college status, disability status, and parents' income), psychological variables (I.e., career adaptability), and features of academic programs (i.e., requirement to take internships, enrollment status, academic program, GPA).

Demographic characteristics and internship participation

Little research exists on the relationship between participation in internship programs and demographic characteristics of college students. Given growing concerns about access to internship programs—particularly for students of color, low-income and first-generation students—here we examine the issue of equitable access for all groups among Madison College students who responded to our survey.

The results show higher internship participation for female relative to male students (see Figure 2; 30% vs 21%). A chi-square test of independence shows a significant relation between gender and internship participation, $\chi^2(1, 382) = 4.21$, $p = 0.04$. Female students are more likely to participate an internship than male students.

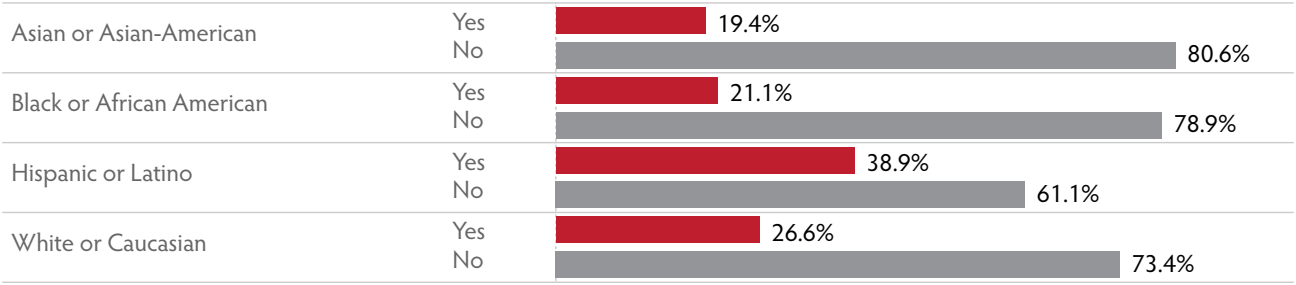
Figure 2. Internship in the Past 12 Months (Yes/No), by Gender



N = 382. Number of observations by category: Female / Yes Internship = 64; Female / No Internship = 147; Male / Yes Internship = 36; Male / No Internship = 135.

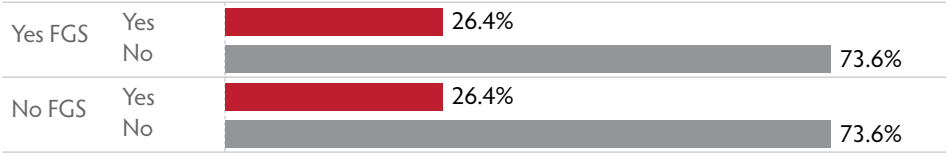
The results also indicate that a higher participation of Hispanic (39%) and White or Caucasian students (27%) participated in internships relative to Black (21%) and Asian students (19%, see Figure 3). Participation in internships were also analyzed for student respondents by the following variables: disability status, first-generation status, and parental income (see Figures 4, 5 and 6). The relationship between internship participation and these variables were not statistically significant.

Figure 3. Internship in the Past 12 Months (Yes/No), by Race / Ethnicity



N = 395. Number of observations by category: Asian or Asian-American / Yes Internship= 6; Asian or Asian-American / No Internship = 25; Black or African American / Yes Internship = 4; Black or African American / No Internship = 15; Hispanic or Latino / Yes Internship = 7; Hispanic or Latino / No Internship = 11; White or Caucasian / Yes Internship = 83; White or Caucasian / No Internship = 229.
Note: American Indian excluded due to confidentiality restrictions

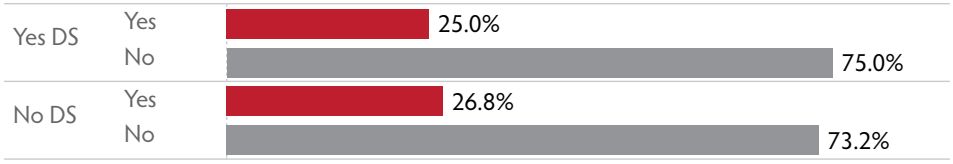
Figure 4. Internship in the Past 12 Months (Yes/No), by Disability Status (DS)



N = 371. Number of observations by category: Yes DS / Yes Internship = 7; Yes DS / No Internship = 21; No DS / Yes Internship = 92; No DS / No Internship = 251.

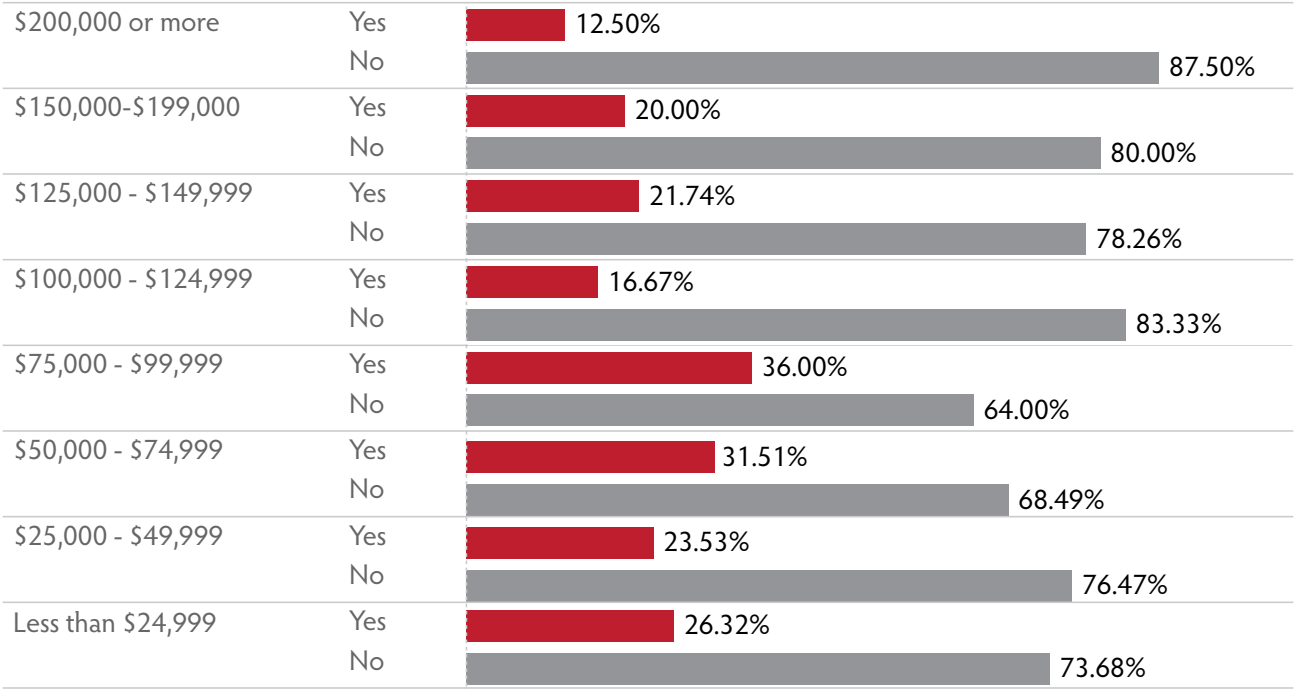
Although we are using *p* value to infer statistical significance in the current study, it is worth noting that *p* value should not be taken as a definitive validation of relationships between variables. Many factors may influence *p* value such as effect size, size of sample and spread of the data (Dahiru, 2008; Ziliak and McCloskey, 2008), so *p* value does not necessarily preclude a cautious analysis of results based on survey data. *p* should be used as a warning signal on the possibility how likely it is that any observed difference between groups is due to chance.

Figure 5. Internship in the Past 12 Months (Yes/No), by First Generation College Student Status (FGS)



N = 386. Number of observations by category: Yes FGS / Yes Internship = 29; Yes FGS / No Internship = 81; No FGS / Yes Internship = 73; No FGS / No Internship = 203.

Figure 6. Internship in the Past 12 Months (Yes/No), by Parental Income



N = 368. Number of observations by category: Less than $24,999 / Yes Internship = 20; Less than $24,999 / No Internship = 56; $25,000 - $49,999 / Yes Internship = 20; $25,000 - $49,999 / No Internship = 65; $50,000 - $74,999 / Yes Internship = 23; $50,000 - $74,999 / No Internship = 50; $75,000 - $99,999 / Yes Internship = 18; $75,000 - $99,999 / No Internship = 32; $100,000 - $124,999 / Yes Internship = 5; $100,000 - $124,999 / No Internship = 25; $125,000 - $149,000 / Yes Internship = 5; $125,000 - $149,000 / No Internship = 18; $150,000 - $199,000 / Yes Internship = 3; $150,000 - $199,000 / No Internship = 12; $200,000 or more / Yes Internship = 2; $200,000 or more / No Internship = 14.

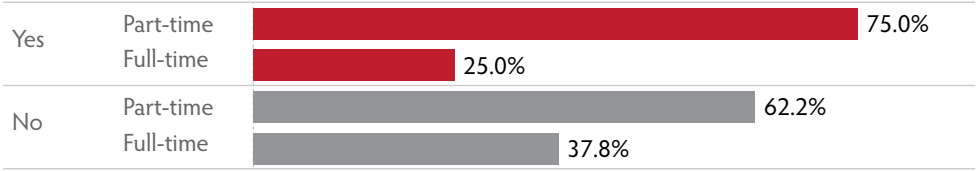
Life circumstances and internship participation

Next, research on college affordability and students' basic needs has indicated that issues such as food insecurity, rising costs of college tuition, and related issues have a negative impact on student persistence and achievement (e.g., Maroto, Snelling & Linck, 2015). To examine these issues we report employment status, reliance on food assistance, challenges with the cost of housing, and skills and knowledge provided by current main job for the entire study sample. In addition, we also examine the relationship between these variables and internship participation.

The chart reports employment status (PT/FT) for those who worked in paid employment in the previous 12 months (see Figure 7). For students who had an internship in the last 12 months, 75% worked PT and 25% worked FT. For students who didn't have an internship, 62% worked PT and 38% worked FT. As expected, there's a comparatively larger proportion of PT workers (75% vs. 62%) among students who had an internship in the last 12 months vs. those without an internship.

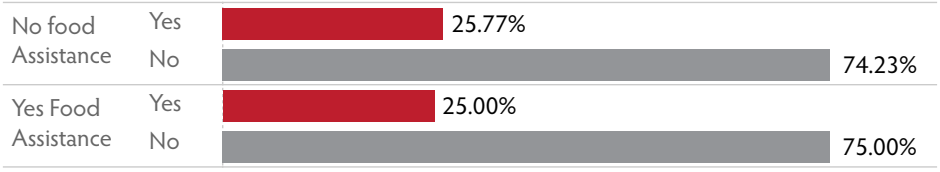
Awareness about college students' challenges with securing adequate food, or what is known as food insecurity, is growing in the US (Broton & Goldrick-Rab, 2016). In our survey, we included a question asking if students had received free food or meals using the Supplemental Nutrition Assistance Program or a food bank, and the results indicate that for students who have and who have not had an internship, approximately 7% of all students reported relying on these resources in the past 30 days (see Figure 8). Given that housing costs can strain a students' financial situation, we also asked about problems with paying rent or mortgages, with 4% of students reported having problems with housing costs (See Figure 9).

Figure 7. Internship in the Past 12 Months (Yes/No) by Employment Status (Part- or Full-time)



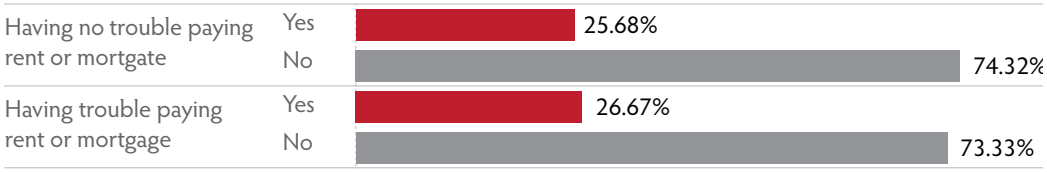
N = 318. Number of observations by category: employment part-time / Yes Internship = 81; employment part-time / No Internship = 200; employment full-time / Yes Internship = 7; employment full-time / No Internship = 30.

Figure 8. Internship in the Past 12 Months (Yes/No) by Students Requiring Food Assistance



N = 385. Number of observations by category: No food assistance / Yes Internship = 92; No food assistance / No Internship = 265; Yes food assistance / Yes Internship = 7; Yes food assistance / No internship = 21.

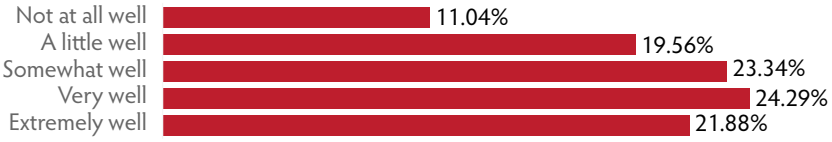
Figure 9. Internship in the Past 12 Months (Yes/No) by Students Having Trouble Paying Rent or Mortgage



N = 385. Number of observations by category: Not having trouble paying rent / Yes Internship = 95; Not having trouble paying rent / / No Internship = 275; Having trouble paying rent / / Yes Internship = 4; Having trouble paying rent / / No internship = 11.

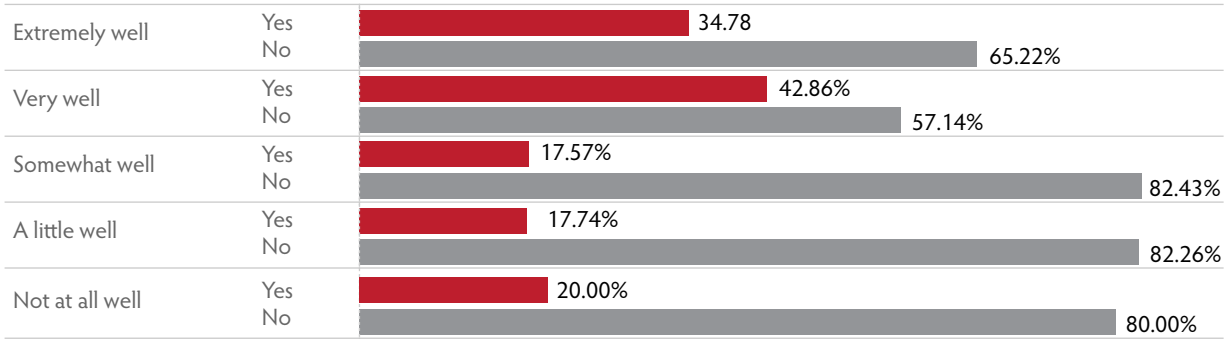
In addition to these potential constraints on internship participation, given that many students work part- or full-time, we explored whether or not their job was contributing to their career goals. In addition to these potential constraints on internship participation, given that many students work part- or full-time, we asked them whether or not their job was contributing to their career goals.

Figure 10. How well do you think that your main job provides you with important work-related skills, knowledge, and abilities that you will need in your desired career? (N = 317)



The results indicate that for approximately 46% of the study sample, the students felt that their main job was providing important career-related skills (see Figure 10). This result raises the prospect that for some students, their "main" paying job may in fact be providing career-relevant skills, albeit without the potential added benefit of close coordination with their academic program that some internships may provide . In addition, we also found that students' participation in an internship was positively and significantly associated with how well their main job provides them with important career-related skills, knowledge, and abilities (see Figure 11). The more work-related skills, knowledge and abilities the main jobs provide, the higher probabilities that a student participated in an internship ($\beta = 0.32$, $p = 0.002$). The odds ratio is 1.38, which indicated that for everyone unit increase in skills and knowledge the main job provides, the likelihood that a student participates in internship increases by approximately 1.38 times.

Figure 11. Relationship between Internship Participation and How Well Current Job Provides Students with Important Skills in Desired Career



N = 317. Number of observations by category: Not at all well / No Internship = 28; Not at all well/ Yes Internship = 7; A little well/ No Internship = 51; A little well / Yes Internship = 11; Somewhat well / No Internship =61; Somewhat well/ Yes Internship = 13; very well/ No Internship = 44; very well / Yes Internship = 33; extremely well / No Internship = 45; extremely well/ Yes Internship = 24.

Psychological factors and internship participation

Research in counseling and vocational psychology indicates that psychological factors are also strongly related to a variety of career-related outcomes. For instance, career adaptability is a psychosocial resource that facilitates a person's ability to manage career-related tasks and changes (Savickas, 1997), which is significantly associated with one's adaptive behaviors (e.g., career planning, career exploration, self-efficacy), employability, vocational self-identity, and satisfaction regarding life, career and school experiences (Rudolph, Lavigne, & Zacher, 2017).

In this study, we are examining the relationship between career adaptability and internship programs, using a validated career adaptability survey developed by Savickas and Porfelli (2012). These survey items encompass four sub-scales including concern about the future, control over one's future, curiosity about different career options, and confidence to achieve one's goals, each of which are measured by six items that elicit how strongly the respondent rates themselves on these attributes. These items use a five-point Likert style set of response options (1=not strong; 5=strongest), resulting in a range of 6-30 for each sub-scale. Cronbach's alpha of the four subscales, using the current data, range from 0.84 to 0.89. To illustrate the types of questions that are included in the career adaptability survey, we report two examples below from the Madison College dataset (see Figures 12, 13).

Figure 12. Please rate how strongly you have developed each of the following abilities: Becoming aware of the educational and vocational choices that I must make (N = 395)

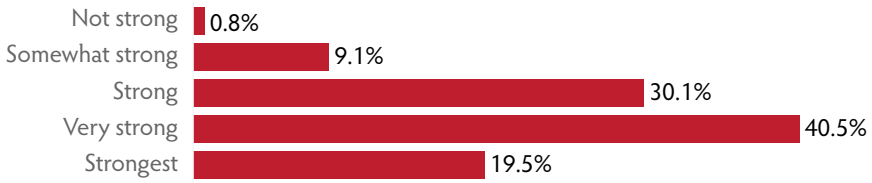
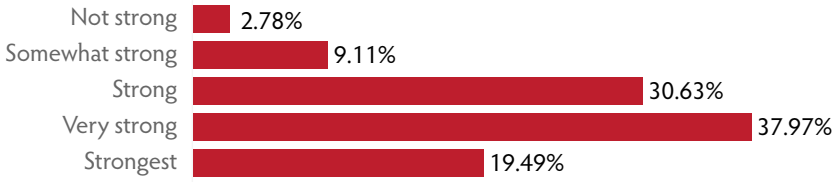


Figure 13. Please rate how strongly you have developed each of the following abilities: Planning how to achieve my goals (N = 395)



The results indicate that the survey respondents from Madison College rate themselves relatively highly across the career adaptability sub-scales: concern (M=22.1, SD=4.44), control (M=22.63, SD=4.34), curiosity (M=21.22, SD=4.77), and confidence (M=23.21, SD=4.25). A logistic regression analysis testing the relationship between the composite career adaptability score and internship participation indicated no significant relationship between the two variables.

Features of academic programs and internship participation

It is also possible that some features of a students' academic program and performance may be related to their participation in internships. Here, we examine the relationship between students' academic programs and students' participation in internship programs.

The results indicate that just under half (44%) of the student respondents were in academic programs that required internships, and that more full-time students (57%) took an internship than part-time students (43%) (see Figures 14, 15). Finally, we examined internship participation rates by disciplinary sector (i.e., high-level disciplinary categories) instead of by individual departments, given the large number of individual programs at Madison College. These results (see Figures 16.1, 16.2) indicate that disciplinary sector with the largest number of students with internships was STEM (50%), followed by social science (17%), Business (17%), and Art (16%). In addition, internship participation rates significantly differ across those program disciplinary sectors, $\chi^2(3, 395) = 18.10$, $p < 0.001$. STEM has the highest participation rate (36%); Art (31%) and Social Science (14%) have relatively lower participation rate; and Business has the lowest participation rate (14%).

Figure 14. Is an internship required to graduate from your academic program? (N = 395)

Figure 15. Internship in the Past 12 Months (Yes/No) by Enrollment Status

N = 395. Number of observations by category: Enrollment Part-time / Yes Internship = 60; Enrollment Part-time / No Internship = 137; Enrollment Full-time / Yes Internship = 46; Enrollment Full-time / No Internship = 152.

Figure 16.1. Internship in the Past 12 Months (Yes/No) by Program Disciplinary Sector

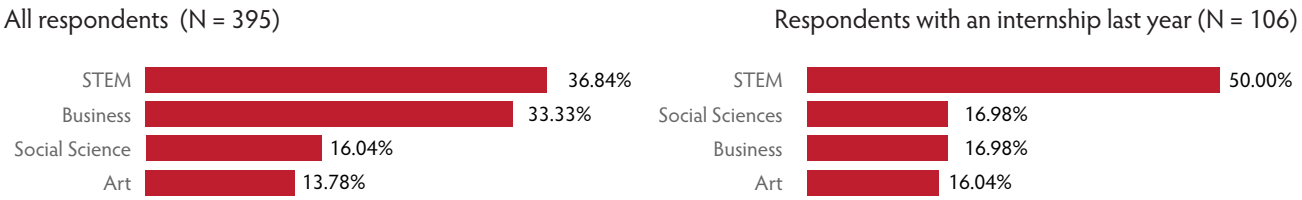
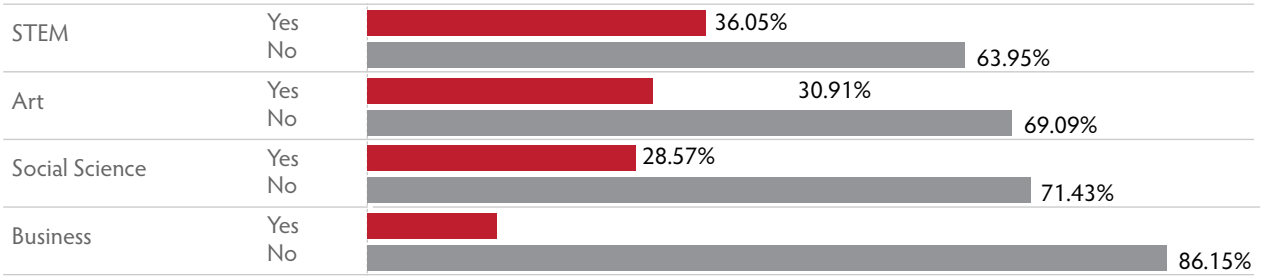


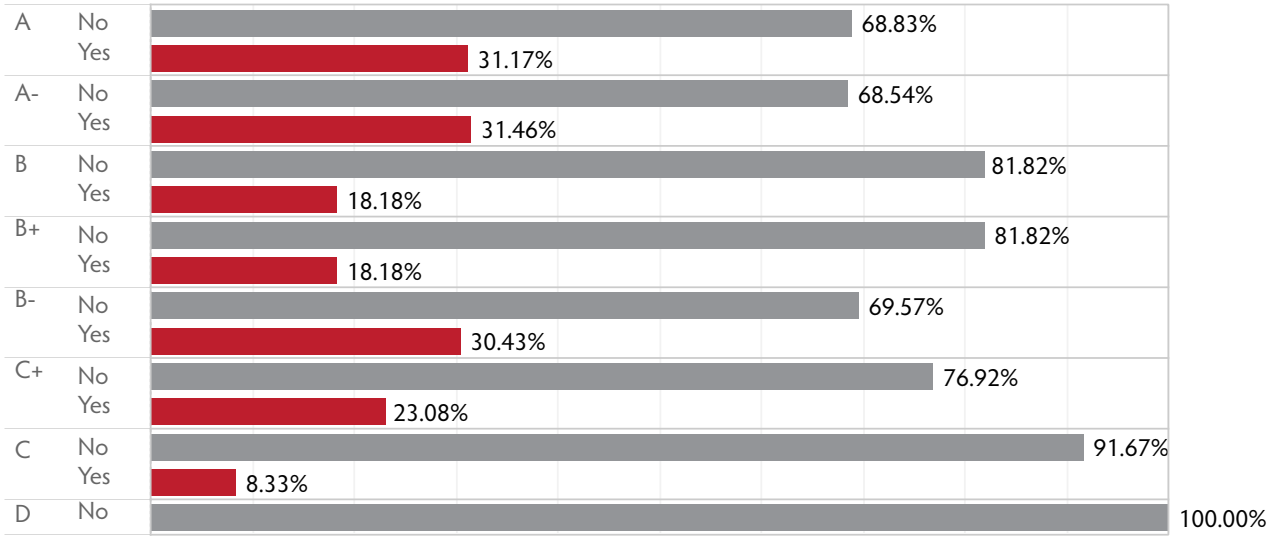
Figure 16.2. Relationship between Internship Participation and Students' Program Disciplinary Sector



N = 395; Number of observations by category: STEM / Yes Internship = 53; STEM / No Internship = 94; Art / Yes Internship = 17; Art / No Internship = 38; Social Science / Yes Internship = 18; Social Science / No Internship = 45; Business / Yes Internship = 18; Business / No Internship = 112.

Finally, there exists a positive and statistically significant relationship between students' grade-point average (GPA) and internship participation, such that the higher the students' GPA the more likely they are to have taken an internship (See Figure 17, $\beta = 0.16$, $p = 0.03$). The odds ratio is 1.78, which indicated that for every one unit increase in GPA, the likelihood that a student participates in internship increases by approximately 1.78 times. These results suggest that students with low GPAs (B- and below) may require additional support, encouragement, or assistance with securing an internship.

Figure 17. Relationship between Internship Participation and Students' Grade Point Average



N = 391. Number of observations by category: D / No Internship= 1; C / No Internship = 11; C / Yes Internship = 1; C+ / No Internship = 10; C+ / Yes Internship = 3; B- / No Internship = 16; B- / Yes Internship = 7; B / No Internship = 36; B / Yes Internship =8; B+ / No Internship = 45; B+/ Yes Internship = 10; A- / No Internship = 61; A- / Yes Internship = 28; A / No Internship = 106; A / Yes Internship = 48;

VII. RESULTS: Barriers to participation in internships for Madison College students

In this section we present findings from the online survey and student focus groups regarding barriers to participation in internships for students at Madison College. Who has access to internships and who does not is a critical issue with respect to the problems of inequality and social mobility that are facing higher education and society at large. Since internships may provide students with valuable social and cultural capital, and enhance their employability in the labor market, these barriers to internship participation should be viewed as one of many potential roadblocks that many students must contend with.

How many students wanted to participate in an internship but could not? If not, why not?

For the 289 students who did not participate in an internship, 53% of them had wanted to do so (see Figure 18). We asked them about various reasons why they were not able to participate and present these results here (see Figure 19). Improving our understanding of the barriers to participation in internships for this population is a critical issue facing our nation's colleges and universities.

Figure 18. You indicated that you did not participate in an internship in the past 12 months. In the past 12 months, were you interested in participating in an internship? (N = 289)

Figure 19. In the past 12 months, why were you not able to pursue an internship? (N = 151)

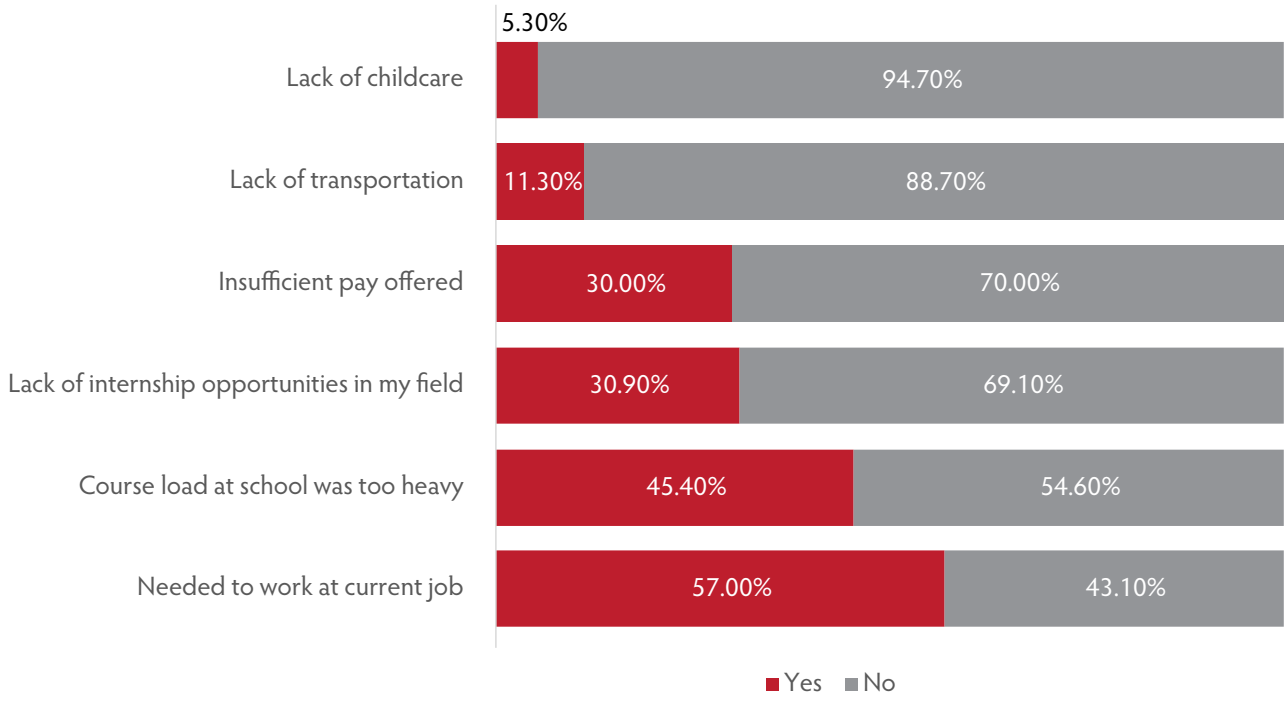


Table 4. Madison College Student Concerns and Difficulties in Participating in Internships (N=14, focus group students)

Concern/Difficulty	Examples
Financial considerations	Issues with the need for financial stability, inability to take unpaid internships; needing to travel for internships
Finding a placement	Issues finding an internship, navigating the campus requirements, and limited availability of internships by field
Finding a relevant internship	Issues with internship tasks and relevance to their career trajectory; concerns about not wanting to do menial work
Timing of internship	Issues balancing internship hours and requirements with course schedule and paid work

Notes. *This sample includes all focus group participants from Madison College; these difficulties include those that were discussed most frequency, in descending order of frequency

Some of the barriers to internship participation that students discussed included financial considerations, finding a placement, finding a relevant internship, and the timing or balance of their internship (see Table 4). Students who underscored financial considerations as a particular barrier noted that this included their need for financial stability. One student noted that returning to Madison College, in general, "[has] been harder than my bachelor's degree, you know, partially because I'm older and have kids and a mortgage, you know, that's part of a function of it."

Other concerns involved finding an internship and balancing it with school and paid work. One student explained, "I find that most internships anyplace will require at least 20 hours, or part time." And another said that this bulk of hours can be a burden, which they considered in planning for future semesters:

> *"It's thinking ahead and thinking next semester I'm going to have to be juggling internship and X amount of classes. And I know my program specifically says you shouldn't do it if you still have more than a certain amount of credits to go, so it's like eight credits per semester or something like that, so you don't overwork and overload yourself with so much left to do if you work an internship 16 hours a week as well. A lot of people are still going to be working their normal jobs too, so."*

As this student notes, the time students spend at an internship, being present and available for school, and managing "normal jobs" can be a tenuous balancing act for students. Students who maintained normal jobs typically did so because they did not have experience in their intended field—which they sought internships to provide. However, given that internship pay (if available) was often not enough money to cover tuition, they would continue to work elsewhere as well.

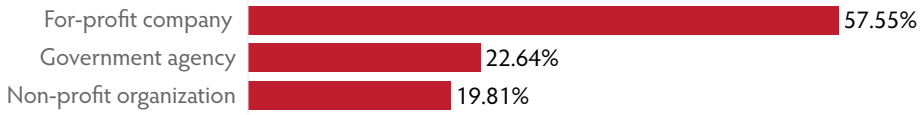
VIII. RESULTS: What types of internships are students at Madison College taking, and what are their experiences in them?

In this section we present findings regarding the types of internship programs that students at Madison College have taken, and their experiences in and with the internship. After describing key features of students' internship programs from the survey data (e.g., organization type, sector, length, compensation), we then report how students described their internship with respect to characteristics that the literature suggests are associated with positive student outcomes and experiences (e.g., supervisor support, task clarity, etc.). Finally, we discuss students' observations about their internship experiences from focus group discussions.

Survey results: Features of internship programs

For the 106 students at Madison College in our study sample that had taken an internship in the past year, 58% of them did so at a for-profit company, with the remainder at government agencies (23%) and non-profit organizations (20%; Figure 20). Many of these internships were concentrated in fields such as information (18%), other services not classified as other sectors (e.g., machine repair, personal care services,) (17%), health care (11%) and science and technical services (8%; Figure 21).

Figure 20. In what type of organization did you participate in this internship? (N = 106)



As defined by the North American Industry Classification System (NAICS), the Information sector "comprises establishments engaged in the following processes: (a) producing and distributing information and cultural products, (b) providing the means to transmit or distribute these products as well as data or communications, and (c) processing data." More information on this sector is available at https://www.bls.gov/iag/tgs/iag51.htm

Figure 21. In what industry or field was this internship in? (N = 106)

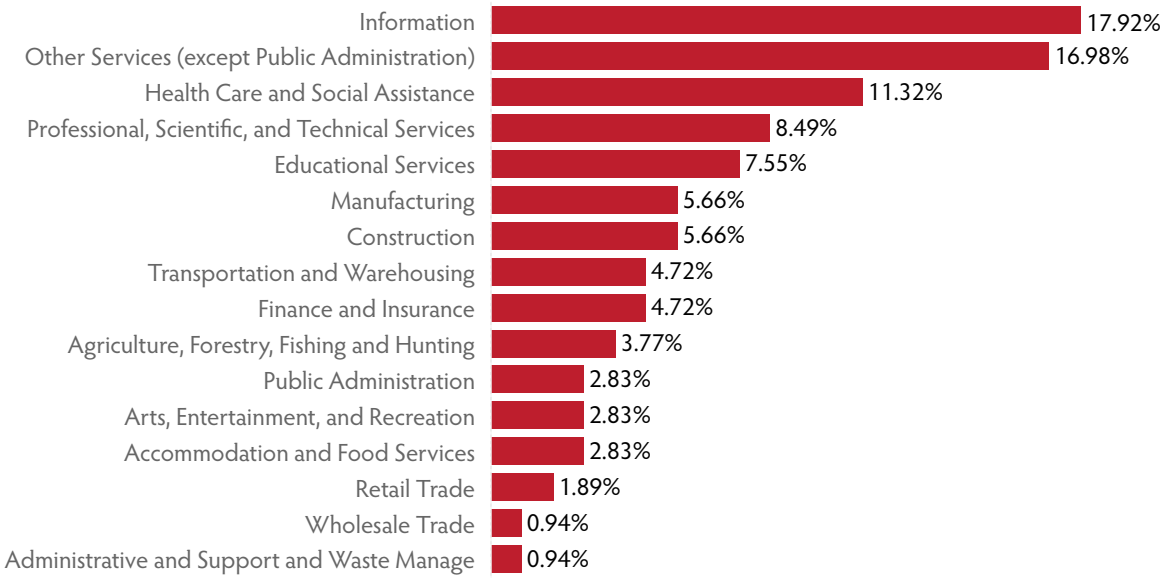


Figure 22. For how many weeks did you participate in this internship? (N = 104)

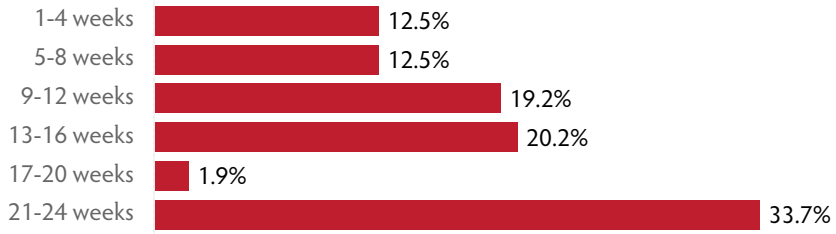


Figure 23. Was the internship paid or unpaid? (N = 106)

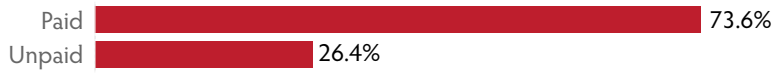
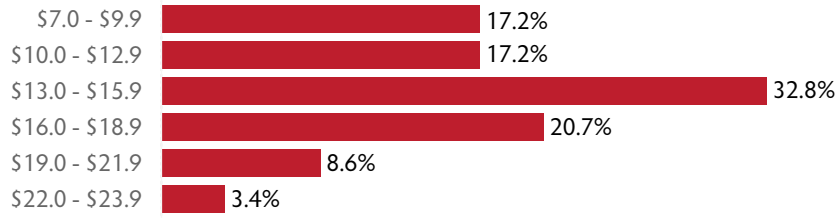


Figure 24. Hourly compensation of internships (N = 106)



These results also indicate that the largest proportion of survey respondents (33.7%) who had taken an internship did so for 21-24 weeks, with the remainder having had an internship experience that lasted less than 16 weeks (Figure 22). Further, 74% of these students were compensated for their internship work, whereas 26% were not (Figure 23). Finally, 65.5% of student interns at Madison College are paid $13/hour or more (Figure 24), which is more than estimates of living wages for one adult in Wisconsin ($11.03) (MIT Living Wage Calculator, 2018).

Survey results: presence of internship characteristics associated with positive student outcomes

Next, we turn to one of the primary research questions driving this study: what is the structure and format of internship programs that Madison College students are taking? Examining this issue, we focus on features of internships that the research literature suggests are associated with positive student outcomes.

Link between academic program and internship

One of the core principles of experiential education is the integration of academic or theoretical concepts with opportunities to apply new knowledge in hands-on situations. Research on internships also indicates that close coordination between academic coursework and internship experiences is also linked to interns' satisfaction (e.g., Hergert, 2009). For Madison College students who participated in an internship, 82% felt that their internship was very or extremely related to their academic coursework (Figure 25). However, fewer students reported that their academic and internship supervisors cooperated to ensure this integration (Figure 26). Here, we report results from the two questions focused on this topic.

Figure 25. How related do you feel your internship was to your academic program? (N = 106)

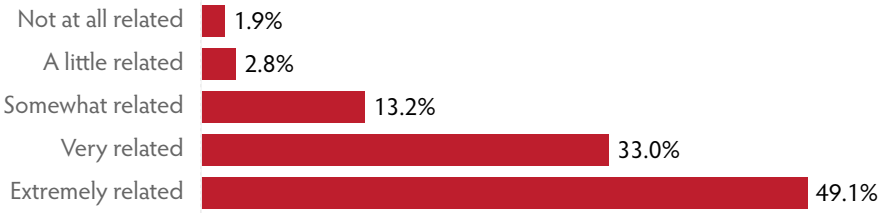
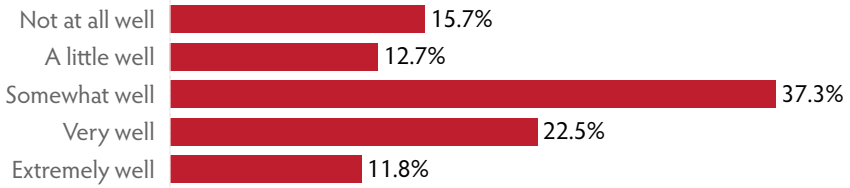


Figure 26. How well did your job site supervisor and your academic program or faculty coordinate with one another to ensure the internship tasks were related to the curriculum? (N = 102)



Perceived supervisor support

Next, the literature also indicates that supervisors' active support of interns' career development and on-the-job satisfaction is strongly associated with positive student outcomes (McHugh, 2017). This construct was measured using four questions (M=16.09 , SD=3.93), and below we report results from two of these items. For example,

Madison College students who had recently taken an internship, 75% reported that their supervisors cared about their satisfaction at work and 74% participants reported that their supervisors appreciate effort they made, two important indicators of supervisor support (Figure 27).

Figure 27. In this internship, how much did your supervisor care about your satisfaction at work? (N = 103)

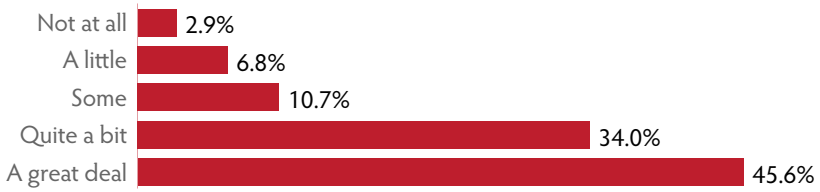
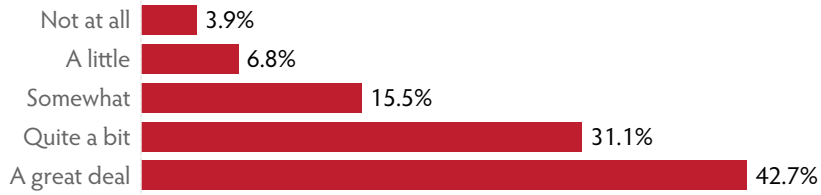


Figure 28. In this internship, how much did your supervisor appreciate the amount of effort you made? (N = 103)



Supervisor mentoring

Another aspect of supervisor behavior found to be positively associated with intern satisfaction is supervisor mentoring, which pertains to the provision of direction and feedback about task performance and career planning. This construct was measured using five questions (M=17.98, SD=5.15), and below we report results from two of these items. While many Madison College students reported that their supervisors provided feedback sometimes, very often, or extremely often, it is concerning that the other half of the respondents reported that their internship supervisors rarely or never encouraged them to use new ways of performing tasks. In addition, although 41.8% of respondents' supervisors very often or extremely often gave interns feedback regarding job performance, 22.3% of the supervisors failed to give feedback (see Figure 29, 30).

Figure 29. How often did your supervisor encourage you to try new ways of behaving in the job? (N = 103)

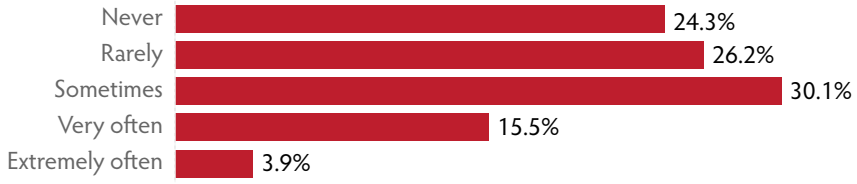
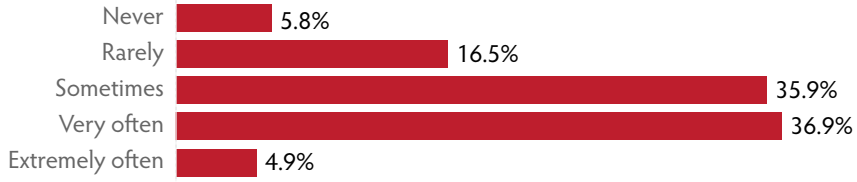


Figure 30. How often did your supervisor give you feedback regarding job performance? (N = 103)



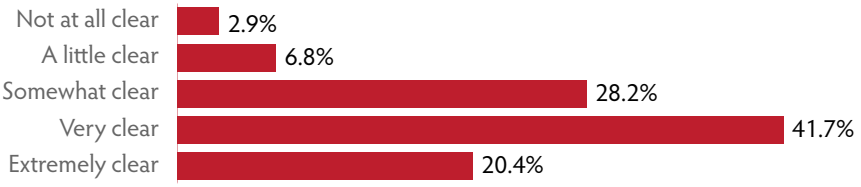
Task goal clarity

Clear expectations regarding work products and how they are evaluated is known as task goal clarity in the literature, and this feature of internships is associated with reduced stress and increased satisfaction on the job site (Beenen & Rousseau, 2010). For some internships that are poorly designed and lack meaningful work, students may end up working on ill-structured and poorly managed tasks (Frenette, 2013). This construct was measured using two questions (M=7.45, SD=1.85), and below we report results from these items (see Figures 31, 32).

The results indicate that 64% of Madison College students taking internships felt that they were given clear objectives and 62% of students felt that they received clear explanation of what they need to accomplish, though the rest of the students who did not report such task goal clarity raise questions about the work that some students are being asked to perform in their internships.

Figure 31. In this internship, how clear were the objectives you were given about what you needed to accomplish? (N = 103)

Figure 32. In this internship, how clear was the explanation of what you needed to accomplish? (N = 103)

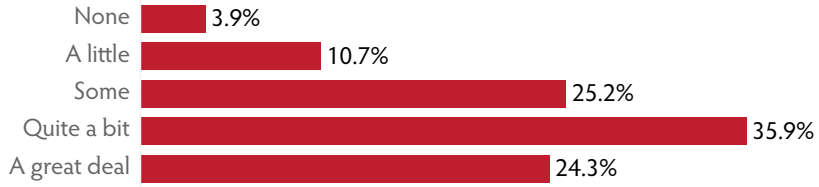


Task autonomy

Besides benefiting from clearly defined tasks, interns also reported higher rates of satisfaction when given autonomy and discretion to perform the tasks assigned to them (McHugh, 2017). This construct was measured using two questions (M=7.50, SD=1.99), and below we report results for these items (see Figures 33, 34). For Madison College students, 67% reported having considerable flexibility in how they completed their work and 60% reported having much freedom to decide how to do their work, indicating that for these students the internship is an opportunity to function with autonomy in the workplace.

Figure 33. In this internship, how much flexibility did you have in how you completed your work? (N = 103)

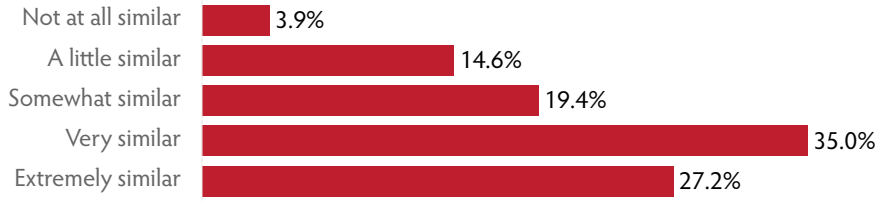
Figure 34. In this internship, how much freedom did you have to decide how to do your work? (N = 103)



Task similarity to entry-level jobs

Finally, one of the persistent questions in the literature is whether interns are provided with work that is of equal difficulty to entry-level employees (Hora, Wolfgram & Thompson, 2017). 62.2% of the respondents reported that their internship tasks were very similar or extremely similar to entry level jobs. However, 18.5% of students felt their internship tasks were a little similar or not at all similar to entry-level jobs. Answers to this question have implications for both compensation and the meaningfulness of the work itself (see Figure 35).

Figure 35. During your internship, how similar in nature were your tasks to those in entry level jobs in the organization? (N = 103)



Focus group and interview results: What were students experiences with their internship?

In addition to these results from our online survey, we held 6 focus groups with 18 students at Madison College. Eight of these students had taken an internship and they described in detail precisely what they did at their internship site and their experiences with mentoring, feedback, and the degree of "fit" between the internship and their coursework and career goals.

Table 5. Madison College Student Experiences in Internships (N=8)

Relation to Academics	
Highly Related	Used what was learned in class at internship; taught software used in internship; enter internship "job-ready"
Somewhat Related	Standards and principles similar between courses and internship, but application in new area; learning additional/new techniques
Not Related	Internship experience entirely separate; new skills, area of focus, or both
Supervision	
Autonomous	Fully autonomous; worked on project separate from supervisor; limited training, guidance, or feedback on task
Some Autonomy	Supervisors present, provide feedback, but supervision is lenient
Scaffolded Experience	More supervision and feedback when learning new skills but less supervision as students advance; learned from supervisor, then worked on own
Highly Supervised	N/A—was not reported by students at Madison College
Feedback / Mentoring	
Lots of Mentoring	Feedback provided at scheduled times; meetings occurred frequently
Lack of Mentoring	Limited meetings with supervisor; feedback provided only when issues occur
Relevance / Fit for Career	
Highly relevant	Saw internship as directly related to future employment; engaged in work that is similar to future employment
Transferrable	Experience in internship was transferrable; applied skills they already had in another field to a new one
Not relevant	Internship not related to future employment; tasks or skills are not related to employment; work is lower-level

Notes: *This sample only includes those Madison College focus group participants who had internships

Table 5 illustrates the main descriptions of students' experiences in internships from the eight participants who had participated in an internship during their time at Madison College. In terms of their relation to their academic coursework, most felt that their internship experience was highly related to their academic work, there were some that felt that it was either somewhat or not related. Participants who felt that their coursework was related to their internship gave examples of using what they learned in school during their internship experience, being taught software that they used as an intern. One student explained that they were so well prepared by what they learned at Madison College, they felt "job ready."

Students also described different kinds of supervision and feedback during their internship experience. Some students described their work as highly autonomous—meaning that they had little training, guidance, and feedback as they completed their tasks. Others felt somewhat autonomous, meaning that they were trained and supervised when necessary—one student said that his supervisor was "not there watching" but that "he's there to answer questions and to fix, you know, issues that come up." Students also described a scaffolded supervision, describing how their supervisors were highly engaged early, as students were learning the skills necessary for the internship, and then they were less involved later in their skill development. One student described it this way: "as I learn more things and as I learn newer things that I don't know about, I have a lot of supervision. But then when it comes to something… that I feel comfortable with, I'm good until I ask, 'Okay, I need help on this, or what do I do next?' or things like that." Regarding their supervisors, students also discussed their level of mentoring—some had internship supervisors that provided mentoring often whereas others' had limited opportunities for mentoring.

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 meant that they felt the tasks they were doing, the skills they were building, and the personal growth they were engaged in would serve them well in the future; some of these students said they were basically doing the work of an entry-level employees (e.g., filing taxes like a tax accountant).

Some students felt that their skills where transferrable to their careers, if not directly relevant. This often included their technical skills (e.g., learning a skill during their internship that would be useful in their future careers), but in lieu of skills some students described their own personal growth that would benefit them in their future employment (e.g., communication, teamwork, self-confidence). One student described the growth she gained from a generally negative experience during an internship:

> *It just really—it gave me a chance to do a lot of personal growing—less like on-the-job learning, more just personal growing for jobs in general. And I really appreciated that because I'd been in management and sales before, and so I'd led teams and things, but I'd never really had to deal with someone over above me basically being the worst human being possible. And so getting that experience now—very nice to have. Yes, because it prepped me for the next time I run into somebody like that so I can just be like, "Mm-hmm. I'm going to just go do my work now." So I got a lot of personal growth out of it.*

Students who did not feel that their tasks were as relevant often described their work as lower-level (e.g., sorting mail) or not related to or transferrable to what they would be doing later in their careers. Few students described this limited relevance; most described it as important in one way or another.

IX. RESULTS: Outcomes of internships

The impacts that internships have on students appears as one of the most important questions facing the field of higher education and workforce development, given their growing prominence in educational policy and programming. In empirical research on internships, this question is answered by tracking changes in variables such as employment status, wages, or vocational self-concept over time. In fact, our research team will be following the panel of students who participated in T1 of our study at Madison College for at least two additional years, with these questions being addressed in the Spring of 2019 and 2020. However, for this cross-sectional analysis of T1 data, we report outcomes in terms of satisfaction with the internship and student perceptions of how well (or poorly) the experience enhanced their career aspirations.

Survey results: Outcomes of internships

Level of satisfaction with internship experience

An important indicator of the usefulness and impact of an internship experience is how students themselves perceive their experience. For this issue we asked a single question about satisfaction, and 68% of Madison College students reported that they were "very" or "extremely" satisfied with their experience. The fact that 24% were only "somewhat" satisfied and 8% were not satisfied with their internship indicates that work remains to be done to improve internships for all students (see Figure 36).

Figure 36. How satisfied were you with your internship experience? (N = 103)

Next, to investigate the relationship between internship satisfaction with other factors that potentially could have contributed to higher or lower rates of satisfaction, we conducted a series of simple linear regressions to test associations between program characteristics and satisfaction. Analyses indicated that several program characteristics can positively predict college students' internship satisfaction, including supervisor support, goal clarity, supervisor mentoring, link between academic program and internship, task similarity to entry-level jobs, and task autonomy. In addition, students' career adaptability (see page 38) also significantly predicted their internship satisfaction.

The following points summarize the results of these analyses (see Appendix B for details):

- Internship satisfaction will increase along with increasing **supervisor support.** Specifically, When students' perceived supervisor support increases by one, satisfaction of internship experiences are expected to increase 0.16; $b = 0.16$, $t(101) = 8.29$, $p < 0.001$. Supervisor support also explained a significant proportion (40%) of variance in internship satisfaction, $R^2 = 0.40$, $F(1, 101) = 68.74$, $p < 0.001$.
- **Goal Clarity** also significantly predicted internship satisfaction, which is predicted to increase 0.31 when goal clarity increases by one; $b = 0.31$, $t(101) = 7.28$, $p < 0.001$. Goal Clarity also explained a significant proportion (34%) of variance in internship satisfaction, $R^2 = 0.34$, $F(1, 101) = 53.05$, $p < 0.001$.
- Internship satisfaction can also be predicted by **supervisor mentoring.** Specifically, when students' perceived supervisor mentoring increases by one, internship satisfaction is expected to increase 0.11; $b = 0.11$, $t(101) = 6.85$, $p < 0.001$. Supervisor Mentoring also explained a significant proportion (31%) of variance in internship satisfaction, $R^2 = 0.31$, $F(1, 101) = 46.92$, $p < 0.001$.

- Internship satisfaction is also expected to increase 0.37 when the **link between academic program and internship** increases by one; b = 0.37, t(101) = 3.85, p < 0.001. Link between academic program and internship also explained a significant proportion (12%) of variance in internship satisfaction, R^2= 0.12, F(1, 101) = 14.79, p < 0.001.
- **Task similarity to entry-level jobs** also significantly predicted internship satisfaction. Satisfaction is expected to increase 0.47 when task similarity to entry-level jobs increases one; b = 0.47, t(101) = 6.65, p < 0.001. Task similarity to entry-level jobs also explained a significant proportion (30%) of variance in internship satisfaction, R^2= 0.30, F(1, 101) = 44.27, p < 0.001.
- Internship satisfaction can also be predicted by **task autonomy.** When task autonomy increases by one, one's internship satisfaction is expected to increase 0.16; b = 0.16, t(101) = 3.55, p < 0.001. Task autonomy also explained a significant proportion (11%) of variance in internship satisfaction, R^2= 0.11, F(1, 101) = 12.58, p < 0.001.
- Finally, **career adaptability** serves as a significant predictor of internship satisfaction. When students' career adaptability attributes (e.g., concern, control, curiosity, and confidence) increase by one, internship satisfaction is expected to increase 0.02; b = 0.02, t(101) = 3.71, p < 0.001. Task autonomy also explained a significant proportion (11%) of variance in internship satisfaction, R^2= 0.11, F(1, 101) = 13.79, p < 0.001.

Developmental value of the internship experience

Next, we examine the impact of program structure on another important outcome of internships – students' perception of how well the experience contributed to their own career development (i.e., developmental value). This construct was developed by McHugh (2017) and we report below the results from the three items that comprise this variable (see Figures 37-39).

Figure 37. How important were the skills or knowledge you learned at this internship for your career development? (N = 106)

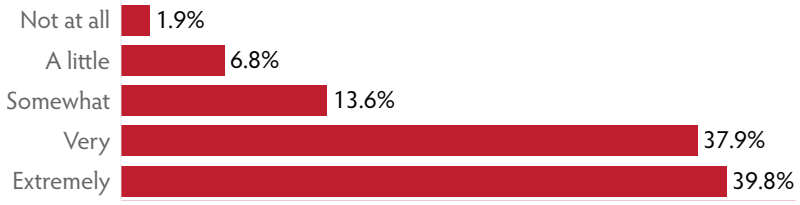


Figure 38. How much did this internship help clarify your career objectives? (N = 106)

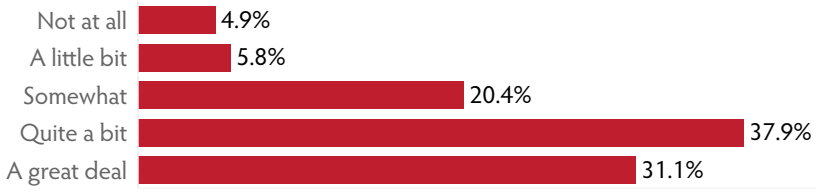
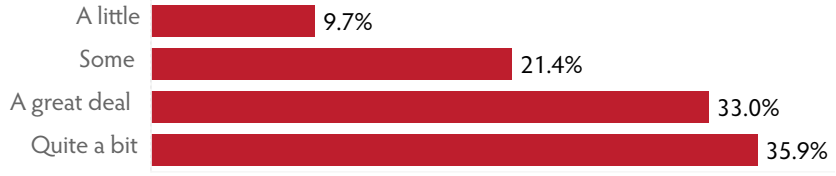


Figure 39. How much new information or skills did you learn? (N = 103)



To investigate the relationship between internship program structure and development value, we conducted a series of simple linear regressions to test associations between these sets of variables. Analyses indicated that some program characteristics can positively predict students' development value including supervisor support, goal clarity, supervisor mentoring, link between academic program and internship, task similarity to entry-level jobs, and task autonomy. In addition, students' career adaptability also significantly predicted their perception of the developmental value of an internship.

The following points summarize the results of these analyses (see Appendix B for details):

- Individuals' development value will increase when they perceive increasing supervisor support. Specifically, when students' **perceived supervisor support** increases by one, development value is expected to increase 0.31; b = 0.31, t(101) = 5.46, p < 0.001. Supervisor support also explained a significant proportion (22%) of variance in development value, = 0.22, F(1, 101) = 29.83, p < 0.001.
- **Goal clarity** also significantly predicted development value, which is predicted to increase by 0.62 when perceived goal clarify increases by one; b = 0.62, t(101) = 5.17, p < 0.001. Goal Clarity also explained a significant proportion (20%) of variance in development value, = 0.20, F(1, 101) = 26.69, p < 0.001.
- **Supervisor mentoring** significantly predicted development value, where development value is predicted to increase 0.27 when supervisor mentoring increases by one; b = 0.27, t(101) = 6.58, p < 0.001. Supervisor Mentoring also explained a significant proportion (29%) of variance in development value, = 0.29, F(1, 101) = 43.29, p < 0.001.
- The development value is also expected to increase when academic program and internship link more closely. Specifically, one's development value will increase 1.26 when the l**ink between academic program and internship** increases by one; b = 1.26, t(101) = 5.20, p < 0.001. Link between academic program and internship also explained a significant proportion (20%) of variance in development value, = 0.20, F(1, 101) = 27, p < 0.001.
- **Task similarity to entry-level jobs** significantly predicted development value, which is expected to increase 1.32 when task similarity to entry-level jobs increases one; b = 1.32, t(101) = 7.39, p < 0.001. Task similarity to entry-level jobs also explained a significant proportion (34%) of variance in development value, = 0.34, F(1, 101) = 54.6, p < 0.001.
- When **task autonomy** increases by one, development value is expected to increase 0.37; b = 0.37, t(101) = 3.11, p < 0.001. Task autonomy also explained a significant proportion (8%) of variance in internship satisfaction, = 0.08, F(1, 101) = 9.70, p = 0.002.
- Finally, **career adaptability** significantly predicted development value. When students' career adaptability (e.g., concern, control, curiosity, and confidence) increase by one, development value is expected to increase 0.05; b = 0.05, t(101) = 2.99, p < 0.001. Task autonomy also explained a significant proportion (7%) of variance in development value, = 0.07, F(1, 101) = 8.95, p < 0.001.

These results indicate that there are a variety of structural and psychological factors that may contribute to a students' perception that their internship was a satisfactory and valuable experience. Thus, as institutions and employers work towards improving these co-curricular experiences, these factors should be on the table as areas worthy of further attention, investment, and improvement.

Focus group results: Outcomes of internships

Next, we review students' accounts of internship outcomes and impacts from the focus group data (see Table 6).

Table 6. Perceived Outcomes of Internship Participation Madison College Students (N=8)*

Outcome	Examples
Real world experience	Gained experience that is different from classroom, hands-on, practice in field, experience in the setting, with people
Professional socialization	Learned how to interact with managers, coworkers, customers, communication (e.g., writing professional emails, making phone calls)
Exploration of self	Developed understanding of self, personal interests, likes/dislikes, career/degree goals, perspective, flexibility, independence
Exploration of field	Narrowed focus for specific career goals and trajectory; Exploring the specific environments, skill sets, or workplaces to aim for
Getting a job	Transitioned from internship to part- or full-time employee; direct job offers from internship host
Networking	Met other people (e.g. mentors and coworkers) in the field who can support future job searches

Notes. *This sample only includes those Madison College focus group participants who had internships; outcomes are listed in descending order of frequency

Students who had participated in internships (N=8) discussed what they gained from their participation in internships, these included real world experience, professional socialization, self and field exploration, getting a job and networking. By far, the most cited outcome of an internship was experience—students underscored the importance of "hands-on experience," One student explained, "I decided to take on an internship right away because, again, I was paid. I was looking for a job and I wanted the -- I talked earlier about the hands-on experience, it really being helpful for my education. And what better way to get hands-on experience than to get a job or get an internship in the career path that you've chosen?"

Students also discussed their internships as important ways for them to explore the field and themselves before jumping into their careers. For one student, getting an internship in administration helped her to broaden her scope, she explained

> *I've been really thinking about [how] I've worked with families extensively in my work experience and I'm looking at careers that might effectively help families at a systems level, maybe more like a social work route or a degree in human development and family studies…Which is a little bit more like you get some psych, some social work, some early childhood or, you know, early development… and wider pool of careers that you could think about then. Instead of, if I'm doing early childhood, you're kind of expected to be a teacher.*

For another student, the internship experience helped him to narrow the scope that he was looking at, by eliminating a specific field and particular organization. When asked what he gained from his internship he explained: "A lot of personal growth. I definitely got to narrow my lens… in where I want to go and it solidified the fact that I'm going to get my bachelor's and my master's and my CPA." But, he clarified, "I don't want to go into private CPA work. I love my CPA, I want to work for myself—and definitely not them." By getting experience in the real world, these students were able to better focus their post-college career path.

X. RECOMMENDATIONS FOR PROVIDING EQUITABLE, HIGH-QUALITY INTERNSHIPS FOR ALL

In this final section we provide some recommendations for students, higher education professionals and employers for increasing the availability of high-quality and equitable internship programs for all students at Madison College.

What students can do

Students are drivers of their self-exploration, career exploration and career planning and management. They need to actively pursue quality Internship experiences, which serve as important work-based learning opportunities that help college students better know their interests, boost skills, and become adaptive to future challenges and changes.

- As illustrated by Figures 2-9 (pages 11-14) there is considerable social-economic variation among the students at Madison College in our survey, including demographic characteristics that may impact students' ability to access an internship experience, especially gender (Figure 2), race (Figure 3), and parental income (Figure 6). Students in the focus groups highlighted the issue of financial considerations as a factor affecting their internship participation (Table 4, page 19). For their part, students should actively search for resources, connections and assistance such as utilizing connections between academic program and potential employers, disclosing financial difficulties, seeking for support, and increasing self-management and time management skills.
- Internship experiences have an impact on students' outcomes including the internship satisfaction and the perceived developmental value (pages 28-30), which may directly influence college students' post-graduation career development and psychological well-being. It is critical for students to manage their relationships with internship supervisors or mentors, pay attention to the mentorship quality that they receive and actively establish effective communication and professional development opportunities as an intern. In addition, one needs to cultivate career adaptability, accumulating both internal and external resources to cope with present as well as potential challenges and transitions.
- Although one's internship satisfaction and perceived contributions of internship to their personal and professional development could be limited by many contextual factors, students ought to treat internship as an opportunity for personal and professional development opportunity, no matter if the internship is required or elective. Table 5 (page 26) and Table 6 (page 31) presents some findings from the focus groups about factors that have the potential to impact students' efforts to work towards their educational and career goals. Students identify their own short-term and long-term goals before entering an internship, and just as important, these goals need be communicated with their academic program coordinator/faculty and internship supervisor at the sites.
- When facing difficulties and psychological stress or distress, students need seek advice and professional help (some of these resources are reviewed in the section of this report titled Institutional Capacity and Procedures for Administering Internship Programs, starting on page 7).

What faculty and institutions can do

Faculty are people who guide the students to know about the world of work and to explore the career future of a major. They play a critical role in building academic foundation for students' future career, connecting the students to employers and educating students work ethics. To facilitate a quality internship program, faculty need to make effort on the following:

- Institutional leaders at Madison College would benefit from carefully scrutinizing the results of our analysis of the institutional capacity for internship programs, and consider which areas represent strengths, weaknesses, and opportunities. Regardless of whether a centralized or de-centralized approach is taken with respect to internship programming, leaders should pay close attention to ensuring that issues related to access and program quality are addressed before expanding or even mandating internships across the entire institution.

- Given some of the social and economic needs of students at Madison College which may be an obstacle to participating in an internship (see Figures 2-9, pages 11-14), staff should understand and advocate for students' if they disclose such needs, including attending to potential concerns with the students' psychological status and mental health. For students who choose not to do internship, staff can communicate with them to understand reasons and seek resources to resolve problems.
- Students indicate that a lack of internship opportunities and challenges finding a placement and in finding a relevant internship (Figure 19 & Table 4, page 19). Staff can help with such challenges by continuing to cultivate relationships with employers, and working with students and employers to increase the link between academic learning and workforce practices. Staff can also work to maintain connections with former students to build an alumni network for the purpose of internship referrals.
- Factors such as an internship's relevance to the student's academic program, the level of task autonomy, the quality of supervisor support, and the presence of mentorship are predictors of internship satisfaction and perceived developmental value (pages 28-30), and all of these factors were described by students as important features of their internship experiences (Table 5, page 26 & Table 6, page 31). Staff can support such desirable outcomes by carefully working with students and employers to design, implement, and evaluate the internship program, to ensure that quality work, supervision and mentorship, and relevance to academic program are maintained.

What employers can do

Employers' recruitment, work setting and design, and mentorship and feedback directly determine students' internship experiences and outcomes. Therefore, employers who host internships or employers who are planning to host internships should attend to the following:

- In addition to the labor and recruitment goals of that employers may have for their internship program, internships should primarily be considered as an educational and developmental opportunity for the students. Given that the quality of supervisor support and the presence of mentorship are predictors of student internship satisfaction and perceived developmental value, employers can enhance this opportunity by carefully designing internship program to include a consistent quality supervision and mentorship by the supervisor or by other senior staff in the organization (peer mentorship programs can also be supportive). Lastly, employers can value interns' efforts and time through providing emotional support and financial support, if possible.
- The clarity of the goals of work tasks and the amount of task autonomy associated with work tasks are both predictors of satisfaction and developmental value, and the presence of quality feedback from supervisors was a theme that students discussed in the focus groups (Table 5, page 26). Supervisors can allow for some task autonomy for their interns by encouraging their creativity, but still provide clear assignments, strategies, and deadlines; and provide periodic feedback to interns which highlights their progress, accomplishments, as well as pointing out shortcomings and proposing action plans.
- The relevance of the internship experience to the academic program and the similarity of the work tasks to entry-level positions in the profession are both predictors of positive student outcomes. The academic relevance of the internship and its fit to the students' career goals were also emphasized by the students in the focus groups (Table 5, page 26). Supervisors should discuss short-term goals and long-term goals with their interns, and adjust the internship program to provide experiences that can support those goals. And supervisors should coordinate with academic program faculty and career advisors to work to align the student's internship and academic program in relevant ways.

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APPENDICES

Appendix A: Research Methodology

The College Internship Study is a mixed-methods longitudinal study (Creswell, 2014; Tashakkori & Teddlie, 2003) of internship programs with three distinct yet inter-related components: (1) an online survey of students while in college and then the workforce, (2) focus groups and interviews with students while in college and then at work (3) interviews with career advisors and other educators involved in internship program administration and with area employers who host interns from the college. Primary data is collected in two phases: Spring of 2018 (T1) and then 12 months later in the Spring of 2019 (T2). The study aims to document the effects of internship participation and program characteristics on a variety of student outcomes, group differences (e.g., socio-economic status, race, gender, discipline, and first-generation status) in internship participation and student outcomes, and institutional experiences with hosting and implementing internship programs.

The survey of students and other data collection activities were conducted in Spring 2018; the current report is based on this data. The online survey was administered to students in the second half their degree programs. In order to focus on students' experiences in internships and not on other internship-like programs, data collection for the survey excluded students in programs with a required clinical practicum (e.g., nursing and other health fields), students in apprenticeship programs, and students in the Liberal Arts Transfer Program. The definition of the term "internship" that we employed for the survey and other data collection activities was as follows:

> *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.*

To participate in the survey, students were contacted with a letter and cash incentive mailed to their home address, and with two subsequent email recruitment letters, which directed them to a unique password-protected URL. The inclusion of incentives for surveys to raise response rates is based on best practices in survey research (Dykema, et al., 2013). Via the link, the students could review the IRB-approved consent form and signal their consent to participate in the research by entering their full name and birthdate. Students who completed the survey via this link received an additional cash incentive by mail.

This survey contains questions regarding whether or not a student has participated in an internship in the last 12 months while in college, their employment status, and demographic characteristics. Students who answered "no" to having participated in an internship in the last 12 months while in college also answered questions about their career preparation and any factors that may have dissuaded them from pursuing an internship (e.g., finances, child care), as well as questions that measure their level of career adaptability. For students who answered "yes" to already having participated in an internship while in college, questions were asked about the design features of their internship (e.g., compensation, type of mentoring, job-site activities, etc.), along with questions about demographics, career adaptability, and their satisfaction and perceptions of the developmental value of their internship experience. A comparison between the overall student population of Madison College and the sample of students who responded to the survey found that (compare to institutional populations – race, gender, majors?).

Descriptive statistics and Cronbach alpha coefficients of the measuring instruments (n = 106)

Item	Mean	SD	α
Supervisor support	16.09	3.93	0.93
Supervisor mentoring	17.97	5.15	0.85
Goal clarity	7.45	1.85	0.87
Task autonomy	7.50	1.98	0.75
Development value	11.83	2.43	0.78
Career adaptability composite	89.16	14.81	0.85
Concern	22.10	4.44	0.84
Control	22.63	4.34	0.86
Curiosity	21.22	4.77	0.88
Confidence	23.21	4.25	0.89

The results of the survey were analyzed using methods such as Pearson Chi-square test, and ordinal logistic regression to explore the effects of demographic background on internship participation. In addition, correlation, simple regression, multiple regression was utilized to explore influential factors on college students' internship satisfaction and development value.

After completing the survey, the students were asked if they were willing to be contacted to participate in an in-person focus group and to be contacted a year later to participate in the follow-up survey. Students who had and had not participated in internships at the time of the T1 survey were asked to participate in the follow-up survey, thereby constituting distinct groups that can be statistically compared to one another during analysis. Additionally, students who complete the survey at T2 will be asked if they can be contacted for a follow-up online or phone interview.

For the focus groups at T1, groups comprised of one to three students were separated into those who have participated in an internship (N=8 students in 4 groups) and those who have not (N=6 students in 2 groups). Prior to the start of the focus group, students were given the opportunity to review the IRB-approved consent forms, ask questions, and to voluntarily consent to participate in the research by signing the form. Students received a cash incentive after consenting to participate in the audio-recorded focus group. Focus groups allow for interactions among participants that explore their experiences and thought processes (Kitzinger, 1995). All students who participated in the focus group completed a free list exercise, where they were asked to identify short words or phrases associated with the term "internships," and to comment on the reasoning for the first term on the list. Students who had an internship experience during college answered questions about the nature of their experience, support from both the academic program and their job-site supervisor, their general level of career adaptability, and so on. For those who have not had an internship, questions focused on the reasons why they have not participated in an internship, as well as their level of career adaptability, and so on.

Finally, we conducted audio-recorded interviews with career services professionals and faculty at Madison College who support student internships (N=12), and with employers who host Madison College students as interns (N=18). A list of potential recruits from among the Madison College staff and area employers was provided by our colleagues at Madison College, and we employed snowball sampling to expand our list of potential recruits, by asking staff to identify

colleagues and employers who they know to be involved in supporting student internships. Prior to the start of the interview, participants were given the opportunity to review the IRB-approved consent forms, ask questions, and to voluntarily consent to participate in the research by signing the form. Similar to the student focus groups, all interview participants completed a free list exercise and discussed their responses. Educators and employers' interviews focused on the types of resources available for their college and/or company, their views on the sufficiency of these resources, and issues related to designing, managing, and implementing effective programs. Lastly, documents from career services, academic departments, and employers that offer internships themselves, were also collected and analyzed for details about design features of internship opportunities.

The data from the free-list exercises collected in these focus groups was analyzed to derive a salience measure that indicates the terms respondents most identify with the concept of internships (Romney & D'Andrade, 1964). The analysts reviewed the freelist data and transformed participants' raw data into standardized list of terms, since respondents may use different words for similar ideas. Once a list of standardized terms was settled on, two researchers applied the terms in parallel to 10% of raw data. The few discrepancies that were identified were resolved by the researchers and the standardized terms were applied to the rest of the raw data. Data were analyzed using Anthropac software to identify the concepts considered most salient to internships by different groups of respondents (e.g., students, educators, employers) (Smith, 1993; Borgatti, 1992).

Focus groups and interviews were transcribed and analyzed in MaxQDA software, which is a discourse analysis software which for sorting and coding transcript data, and ultimately, to identify themes and patterns in the corpus. First, two researchers created a procedure to segment the interviews based on the interview protocol. Both researchers practiced with the protocol and coded two interviews in parallel; and the few discrepancies that were identified were resolved and the rest of the interviews were coded by the two researchers. Then, the researchers reviewed the corpus of transcripts to identify themes in the data regarding the obstacles to participating internship and the characteristics of internship experience (Ryan & Bernard, 2003; Corbin & Strauss, 2014). The codes developed through this process were checked by the pair of researchers applying them in parallel to a selection of 10% of the transcript data; a few discrepancies were identified and resolved by the researchers, and the codes were then applied by the researchers to the entire corpus.

The limitations of this study are the small sample size of the student focus groups which could not be representative of students from the wide range of academic programs offered at Madison College. This was also a non-random sample, with students self-selecting into the pool of volunteers who we contacted and tried to schedule for focus groups. Finally, in our study we did not examine whether or not study participants had participated in other work-based learning programs (e.g., apprenticeships), and the potential impacts of these experiences on their learning and career goals.

Appendix B: Results of Regression tables

Table 1. Results of simple linear regression of internship program features and career adaptability on students' internship satisfaction

Predictor	B	SE B	β	t	p	adj. R^2
Supervisor support	0.16	0.02	0.64***	8.29	< 0.001	0.40
Goal Clarity	0.31	0.04	0.59***	7.28	< 0.001	0.34
Supervisor Mentoring	0.11	0.02	0.56***	6.85	< 0.001	0.31
Link between academic program and internship	0.37	0.10	0.36***	3.85	< 0.001	0.12
Task similarity to entry-level jobs	0.47	0.07	0.55***	6.65	< 0.001	0.30
Task autonomy	0.16	0.05	0.33***	3.55	< 0.001	0.11
Career Adaptability	0.02	0.01	0.35***	3.71	< 0.001	0.11

Dependent variable: Internship satisfactions

β refers to the standardized regression coefficient that demonstrated the change in internship satisfaction per unit change in internship satisfaction.

Adjusted R square is a modified version of R square, which is also called coefficient of determination. R square measures the percentage of the variation in dependent variable (Y) explained by independent variable (X) for a linear regression model. Therefore, higher the R squared, the more variation is explained by input variables and hence better is the model.

All models and predictors are significant. *p < 0.05, **p < 0.01, ***p < 0.001

Table 2. Results of simple linear regression of internship program features and career adaptability on students' development value

Predictor	B	SE B	β	t	p	adj. R^2
Supervisor support	0.31	0.06	0.48***	5.46	< 0.001	0.22
Goal Clarity	0.62	0.12	0.46***	5.17	< 0.001	0.20
Supervisor Mentoring	0.27	0.04	0.55***	6.58	< 0.001	0.29
Link between academic program and internship	1.26	0.24	0.46***	5.20	< 0.001	0.20
Task similarity to entry-level jobs	1.32	0.17	0.59***	7.39	< 0.001	0.34
Task autonomy	0.37	0.12	0.30***	3.11	< 0.001	0.08
Career Adaptability	0.05	0.02	0.29***	2.99	< 0.001	0.07

Dependent variable: Perceived development value
All models and predictors are significant. *p < 0.05, **p < 0.01, ***p < 0.001

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The College Internship Study

CCWT staff are available to conduct program evaluations and/or needs assessments of a college or university's internship program such as the one reported here. Our procedures are guided by the rapid ethnographic assessment method and can involve quantitative and qualitative data sources including surveys, document analysis, focus groups and interviews. After analysis, customized technical reports can be provided to institutional partners with actionable recommendations provided regarding how to address challenges and capitalize on program strengths.

The mission of The Center for Research on College-Workforce Transitions (CCWT) is to conduct and support research, critical policy analysis, and public dialogue on student experiences with the transition from college to the workforce in order to inform policies, programs, and practices that promote academic and career success for all learners.

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