



Results from the College Internship Study at UW-Oshkosh

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The **College**
Internship Study

EXECUTIVE SUMMARY

This report includes preliminary findings from the first round of data collection at the University of Wisconsin Oshkosh for *The College Internship Study*, which is a mixed-methods longitudinal study of internship programs run by the Center for Research on College-Workforce Transitions (CCWT) at the University of Wisconsin-Madison (UW-Madison). The study includes an online survey of students in the second half of their academic programs (n=221), focus groups with students who have and who have not had an internship experience (n=19), interviews with career advisors and faculty (n=11), and interviews with area employers involved in internship program administration (n=15). The first stage of data collection occurred in the Spring of 2019, which will be followed by a second round of data collection in the Spring of 2020.

The research questions guiding this study focus on how stakeholders conceptualize and define 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:

- Students, educators, and employers all consider internships to be associated with “experience,” “college,” and “learning.” Interestingly, the theme of internship compensation (i.e., being “paid”) was third from the top of the list for students, but only 11th from the top for educators and absent from the employer list;
- Forty-nine percent of the respondents to our survey had participated in an internship program within the past year (n=108), which also means that 51% (n=113) did not take an internship;
- Of the students who had taken an internship, 39.4% were in programs that did not require an internship while 54.3% of participants reported that internships were required to graduate;
- Participation in internships was not correlated with many of the demographic variables measured in our survey, such as gender, race, first-generation student or disability status. However, students with a higher parental income, part-time employment or no employment were more likely to have participated in an internship. Internship participation also significantly varied across academic program disciplinary sectors;
- Sixty-two percent (n=70) of students who did not take an internship had wanted to do so. Barriers to participation in internships included a heavy course load (74.3%), a need to work at current job (64.2%), a lack of internship opportunity (61.3%),

insufficient pay offered (54.3%), a lack of transportation (41.4%), and a lack of childcare (28.6%). Focus group participants also reported several barriers to their participation in internships, including challenges finding or obtaining a placement, financial considerations, scheduling problems, and a lack of needed skills;

- Several features of internship program structure were strongly associated with student satisfaction and their perception that the internship helped to develop their skills and personal career goals, including: the quality of supervisor support and mentoring, the goal clarity of work tasks, and the link between academic program and internship learning;
- Career adaptability, a psychosocial resource for individuals to manage career-related challenges and changes, was significantly associated with students' internship satisfaction and perceived developmental value;
- While outcomes such as employment status and wages will be studied over the next 12 months, short-term outcomes of participating in an internship program include boosting students' resumes, gaining self-confidence, skills, and experience, and exploring the profession.

This report concludes with recommendations for specific strategies that students, faculty and staff at UW-Oshkosh, and employers who supervise interns, can take to increase participation rates, access, and program quality for internship programs in the Fox Valley.

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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 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 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 instructors, and career services professionals at UW-Oshkosh 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 co-ops 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). Similarly, it is untenable to assume that all internships provide a robust experiential learning opportunity in the spirit of the types of hands-on learning envisioned by educational theorists (e.g., Dewey, 1938 and Resnick, 1987). As a result, research examining the specific structural features of the learning environment that comprise the internship experience is particularly needed to inform internship policy and practice (Cannon & Geddes, 2019)..

In our study, we build upon promising lines of inquiry that examine important 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 are those of students’ employment status, employer demand, or students’ perceived readiness to enter the labor market (e.g., Baert, Neyt, Siedler, Tobback, & Verhaest, 2019; Jung & Lee, 2017; Nunley, Pugh, Romero, & Seals, 2010; Powers, Chen, Prasad, Gilmartin, & Sheppard, 2018; 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 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 of our nation’s colleges and universities.

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 UW-Oshkosh in the Spring of 2019. The online survey was administered to 1250 students in the second half of their program (with the exception of students in nursing and teacher education programs), and 221 responded which resulted in a response rate of 17.7%. 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). At the conclusion of the survey, 19 students volunteered for focus groups, which lasted approximately 45 minutes each, included between 1 and 3 students, and included more in-depth questions about experiences with and barriers to internships. In addition, 11 educators and 15 employers participated in an hour-long interview regarding his/her own experiences administering internships (see Table 1).

Table 1: Description of Spring 2019 sample

	Survey	Focus Groups	Interviews
Students	221	13 (n=19 individuals)	N/A
Educators	N/A	N/A	N/A
Faculty/instructors	N/A	N/A	5
Career advisors	N/A	N/A	6
Employers	N/A	N/A	15

The data reported here represent the first phase of data collection at UW-Oshkosh (Time 1). Data will also be collected in the Spring of 2020 (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.

Table 2: Description of student sample

	Survey Sample	Institutional Population
Total	221	1250
Gender	Male = 83 37.6% Female = 136 61.5%	Male=50.9% Female=49.0%
Race	Asian = 13 5.9% Black = 3 1.4% Hispanic = 10 4.5% American Indian = 2 0.9% White = 184 83.3%	Asian=5.6% Black=3.8% Hispanic=5.6% American Indian=1.8% White=81.9%
1st gen status	Yes = 89 40.2% No = 132 59.7%	Yes=N/A No=N/A

These data were analyzed using a variety of techniques, including qualitative analytic techniques such as inductive theme analysis of interview and focus group transcripts, saliency analysis of free-list terms; as well as quantitative analytic techniques such as descriptive analyses of survey responses, chi-square testing, Fisher’s exact test of independence, logistic regression, and multiple regression analysis 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 in 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 the UW-Oshkosh we collected information on these issues from staff and students, along with an analysis of online and hard-copy documents.

Similar to this map of the institutional capacity, companies that provide training and consultation services for employer internship programs (such as Intern Bridge, www.internbridge.com), provide support for organizations to audit their own resources, processes, and desired outcomes for their internship programs. Such an exercise is important to confirm that the organization’s resources are aligned with the goals of their internship program.

Are internships required to graduate from UW-Oshkosh?

All 9 majors in the UW-Oshkosh College of Business require an internship for graduation, as well as the following 6 programs across campus: Human Services Leadership, Social Work, Computer Science, Kinesiology, Medical Technology, Radio TV Film. Nursing and Education have a required practicum rather than an internship. In total, 36 programs at UW-Oshkosh offer a credited internship course, either as a program requirement or as an elective.

Who is in charge of administering internship programs?

The organization of internship programming at UW-Oshkosh varies across the three colleges that offer internships, as one administrator explained, “So, at the institutional level there is not one internship experience available for all students.” The College of Business has a highly structured and centrally organized internship program, with advisors and administrative staff (1.25 FTE) dedicated to supporting student internships in their college. In contrast, the support of internships in the College of Letters and Sciences is decentralized, with individual faculty within academic departments and programs each managing their own internship programs. Students in the human services programs in the College of Education and Human Services also do internships, which are organized at the departmental level. General support for students’ careers and internships is provided by the Office of Career & Professional Development, which has a staff of 7.5 FTE career advisors who all support student internships in the context of their career advising work; two of which focus specifically on internship support and another who specializes in employment relations. The office also employs between 2-4 graduate interns to help support student career development. For the 2017-2018 academic year, the office reported 4,817 student appointments that involved supporting student internships. Also during that time, 6,718 students used Handshake to obtain information and apply for internships and/or regular employment (a total of 10,173 internships were posted on Handshake). In addition, the staff and the Office of Career & Professional Development conducted 7 career fairs, 185 classroom presentations, and 6 other events, that normally involved supporting student internship opportunities.

What is involved in the administration of internship programs?

Staff at the Office of Career & Professional Development conduct resume reviews and interview coaching with students, and collaborate with faculty and employers to identify appropriate internship sites. Advisors also support student internships by giving career development presentations in internship courses offered by faculty, by sponsoring internship and job recruitment fairs on campus, and by conducting a cross-campus internship course for students in programs that may lack that opportunity. Advisors at the Office of Career & Professional Development are heavily involved in the process of cultivating relationships with employers for the purposes of identifying internship hosts (faculty occasionally engage in this work as well). In some cases, faculty match students with particular employers, and in other cases, they send emails to students with 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: 1) educating and formalizing an agreement on the expectations of the internship between the student, supervisor, and faculty; 2) midterm or more frequent check-in meetings and a final end-of-internship evaluation meeting with the student and/or supervisor; and 3) assigning and evaluating reflective a writing assignment or project 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 may be during tax season) others find that they have interns participating year-round. Large employers sometimes conduct their internship programs during the summer. While internship opportunities often become available during the academic year—depending on employers' needs—a number of students stated that they preferred summer internships, which they found easier to schedule because they were not enrolled in courses for the summer term.

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. They highlighted the academic, developmental, and career preparation outcomes for their students, gained through applying academic knowledge to work settings. As one career advisor explained, “To me, an internship is a way to really gain that firsthand experience in the field. And really to apply what they're learning in their programs in a real work setting.” Advisors also emphasized that the first-hand experience in a professional field provided by an internship was an ideal setting for students to explore their career interests. Both instructors and advisors have also observed that many students, who may be hesitant at first, often develop great personal self-confidence and acquire needed self-advocacy, communication, and teamwork skills through their internships. And some faculty stated that they felt that internships helped their students become more aware of the importance and relevance of their academics to their future career, and caused a renewed motivation to succeed and complete their academic studies and to transition to the workforce.

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

From our review of the research literature on college internships, the term internship 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 was not 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, there is the related issue of not knowing what different parties think about when they hear the term internship, 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. This data was 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 at UW-Oshkosh.

Students (n=18)		Educators (n=11)		Employers (n=15)	
Term	Salience	Term	Salience	Term	Salience
Experience	0.456	Experience	0.621	College	0.53
College	0.337	Learning	0.41	Learning	0.434
Paid	0.25	Connections	0.363	Intern qualities	0.353
Advancement	0.233	Mentorship/guidance	0.294	Experience	0.33
Learning	0.23	College	0.292	Development	0.287
Opportunity	0.18	Practical application	0.271	Advancement	0.208
Career	0.157	Positive	0.238	Internship tasks	0.193
Unpaid	0.155	Professionalism	0.21	Opportunity	0.19
Development	0.148	Soft skills	0.199	Soft skills	0.14
Internship location	0.143	Negative	0.189	Mentorship/guidance	0.139
Connections	0.127	Paid	0.189	Future	0.14
Relation to major	0.117	Valuable	0.173	Skills	0.119
Future	0.109	Exploration	0.167	Exploration	0.116
Real world	0.079	Development	0.155	Temporary	0.107
Low-value work	0.072	Advancement	0.141	Positive	0.105

Table 3 illustrates that students, educators, and employers all consider internships to be associated with “experience,” “college,” and “learning.” Interestingly, the theme of internship compensation (i.e., being “paid”) was third from the top of the list for students, but only 11th from the top for educators and absent from the employer list. Among the top five of the lists, students also prioritized “advancement,” educators prioritized “connections” and “mentorship/guidance,” and employers prioritized intern “qualities” and the “development” of interns, emphasizing their perspective as individuals who recruit, hire, and supervise interns for their firms or organizations.

VI. RESULTS: : Which students are taking internships at the University of Wisconsin-Oshkosh?

In this section we present findings from the online survey and student focus groups regarding the number of students at UW-Oshkosh 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=221) we found that 108 students (48.9%) took an internship in the past 12 months, with 65 students (60.2%) having only one internship experience and 35 students (32.4%) had two or three internships.

Figure 1. In the past 12 months, have you participated in an internship? (N=221)



These results indicate that a large number—approximately more than half of the study sample—have not had an internship experience, indicating that substantial growth in rates of internship participation is possible at UW-Oshkosh. However, this result should be interpreted with caution, so that participation in internships is not viewed solely as an issue to be addressed by mandating them for graduation. Instead, participation should also be considered in light of other issues including barriers to participation for students (e.g., compensation), availability of employer hosts, and requirements of and relevance for individual academic programs.

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 factors 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).

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—we examine the issue of equitable access for all groups among UW-Oshkosh students who responded to our survey.

The results show similar participation for female and male students (see Figure 2; 42.2% vs 52.9%). Most of the participating students (83.3%) are White, 51.1% of them had internship experiences and 48.9% of them had no internship experiences. Participation in internships were also analyzed for student respondents by the following variables: disability status and first-generation status (see Figures 4 and 5). The relationship between internship participation and these variables were not statistically significant.

Figure 2. Internship in the Past 12 Months (Yes/No), by Gender (N=219)

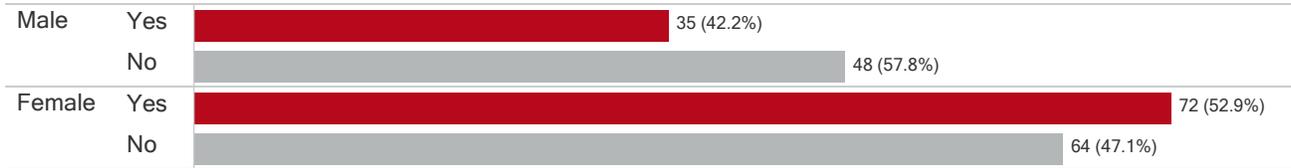
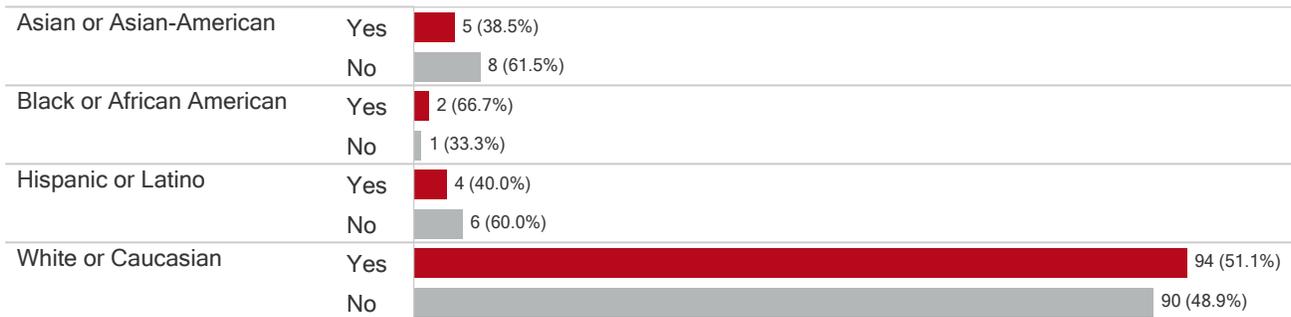


Figure 3. Internship in the Past 12 Months (Yes/No), by Race / Ethnicity (N =210)



Note: Native Hawaiian or Pacific Islander, Foreign or nonresident alien, Two or More Races, and Others were excluded from this figure.

Figure 4. Internship in the Past 12 Months (Yes/No), by First Generation College Student Status (FGS) (N=221)



Figure 5. Internship in the Past 12 Months (Yes/No), by Disability Status (DS) (N=220)

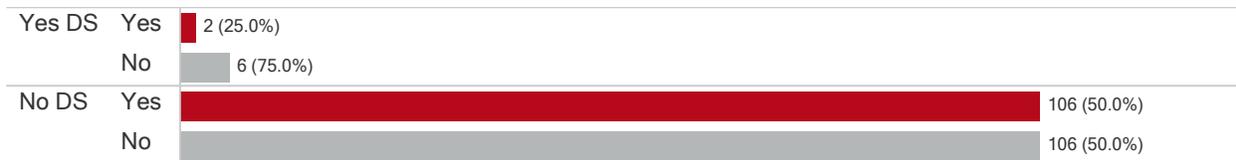
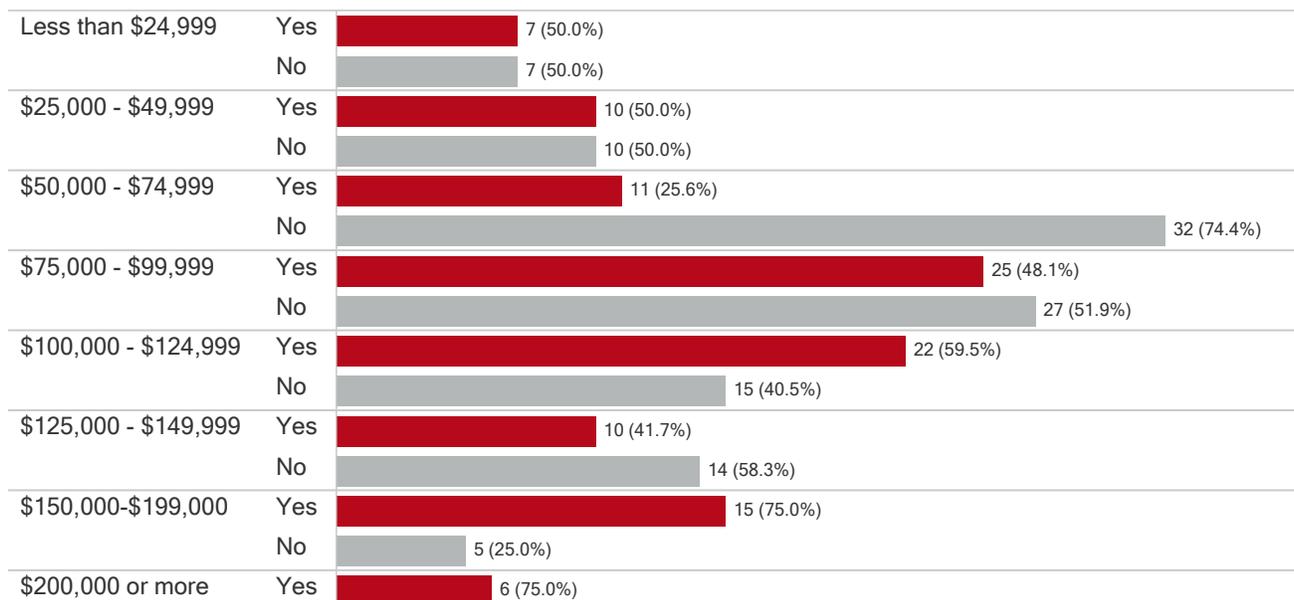


Figure labels describe frequency and internship participation rate within the group.

Parental income is an important indicator of students' socio-economic status. We asked students to report their parents' income from eight categories, ranging from less than \$24,999 to \$200,000 or more. Logistic regression results indicated that parental income significantly positively associated with internship participation ($\beta = .05, p = .015$). Lower parental income is associated with lower probability that one participates in an internship. The odds ratio is 1.05, which indicated that for every one unit increase in parental income, the likelihood that a student participates in internship increases by approximately 1.05 times. These results suggest that students with low parental income may require additional support, encouragement, or assistance with securing an internship.

Figure 6. Internship in the Past 12 Months (Yes/No), by Parental Income (N=219)



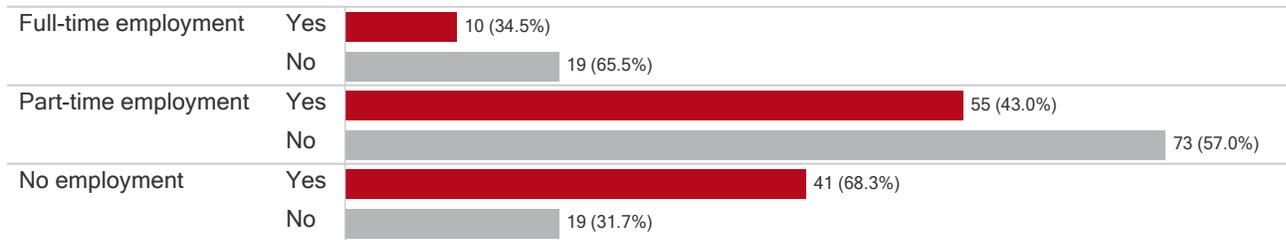
Note: the group "N/A my parents/guardians are deceased" was excluded

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.

Figure 7 displays employment status (PT/FT/No-employment) for those who work. For students who worked at a full-time job that is not an internship during the last 12 months, only 34.5% had an internship. For students who worked at part-time job and students who did not work for pay at a job, internship participation rate was significantly higher, $\chi^2(2, 217) = 13.28, p = .001$.

Figure 7. Internship in the Past 12 Months (Yes/No) by Employment Status (N = 217)



Awareness about college students’ challenges with securing adequate food, or what is known as food insecurity, is growing in the U.S. (Brotton & 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, only 1.3% (n=3) 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 4.5% (n=10) of students reporting housing cost problems (See Figure 9). Due to the small number of students who reported these two constraints, we will not use the current data to infer their relationships with internship participation.

Figure 8. Internship in the Past 12 Months (Yes/No) by Students Requiring Food Assistance (N=221)



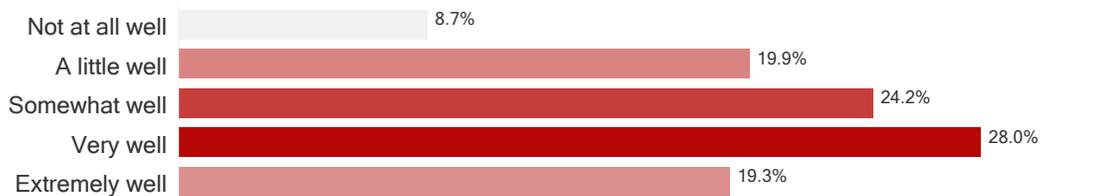
Figure 9. Internship in the Past 12 Months (Yes/No) by Students Having Trouble Paying Rent or Mortgage (N=221)



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.

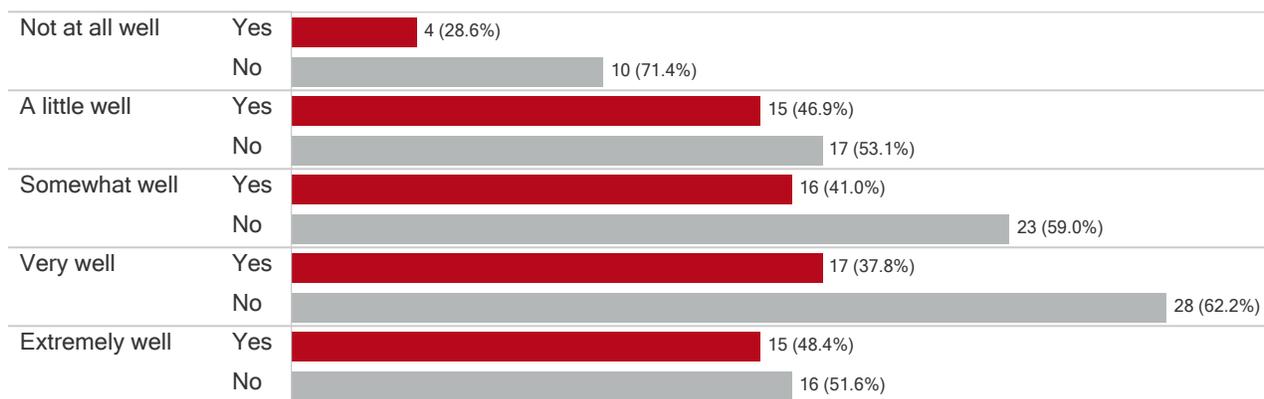
Although we are using p value to infer statistical significance in the current study, it is worth noting that p value should not be taken as a definitive validation of relationships between variables. Many factors may influence p value such as effect size, size of sample and spread of the data (Dahiru, 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 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 = 221)



The results indicate that 47.3% of the students with a non-internship job felt that their main job was providing important career-related skills very well or extremely well. This finding 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, figure 11 shows that students who reported that their main job did not provide them with important career-related skills, knowledge, and abilities were more likely to participate in an internship. However, these differences were not statistically significant.

Figure 11. Relationship between Internship Participation and How Well Current Job Provides Students with Important Skills in Desired Career (N = 221)



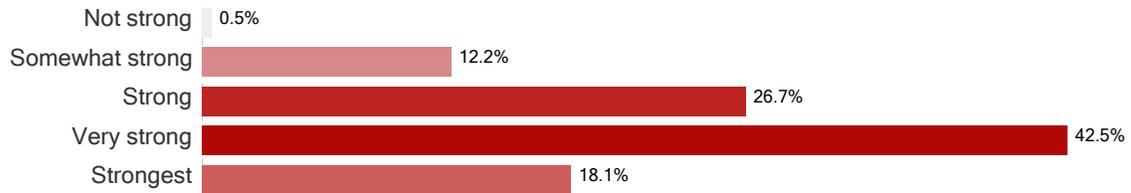
Psychological factors and internship participation

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).

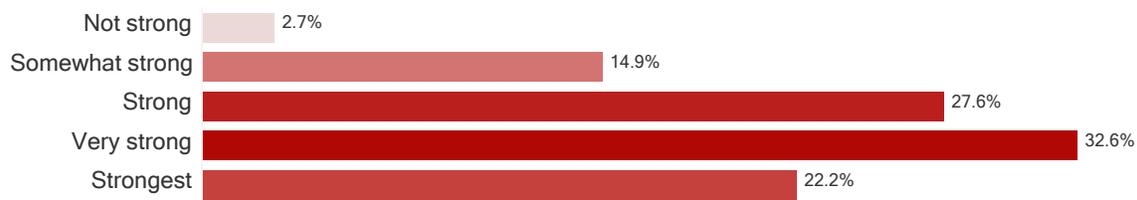
In this study, we examined the relationship between career adaptability and internship participation, using a validated career adaptability survey developed by Savickas and Porfelli (2012). These survey items encompass four sub-scales including concern about the future, control over one’s future, curiosity 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 0.83 to 0.94. To illustrate the types of questions that are included in the career adaptability survey, we report two examples from the UW-Oshkosh 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 = 221)**



**Figure 13. Please rate how strongly you have developed each of the following abilities:
Planning how to achieve my goals (N = 221)**

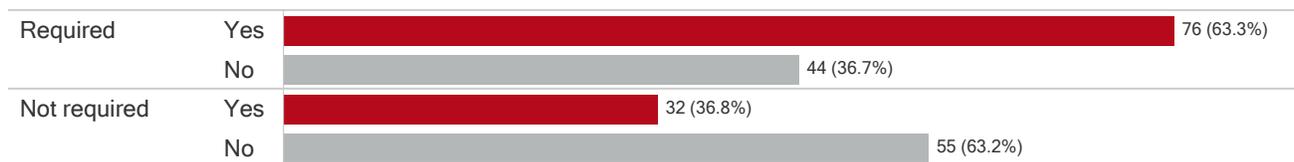


The results indicate that the survey respondents from UW-Oshkosh rate themselves relatively high across the career adaptability sub-scales: concern (M=3.72, SD=0.79), control (M=3.70, SD=0.72), curiosity (M=3.43, SD=0.78), and confidence (M=3.77, SD=0.72). Logistic regression analyses indicated no significant relationship between the composite career adaptability score and internship participation.

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.

Figure 14. Relationship between Internship Participation and whether or not an internship was required to graduate from your academic program (N=207)



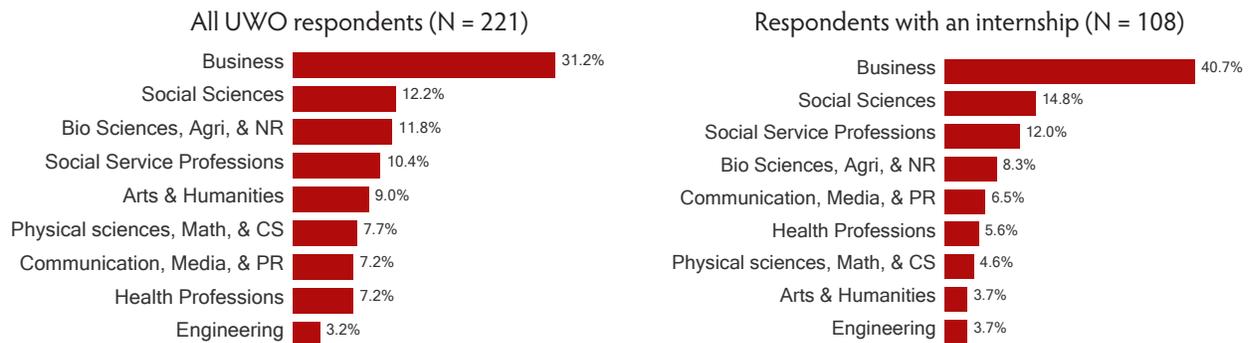
The results indicate that 54.3% of the respondents were in academic programs that required internships for graduation, who were more likely to participate in an internship compared to students who were not required to take an internship to graduate (63.3% vs. 36.8%). In addition, 85.1% of the 221 survey respondents were full-time students and 14.5% were part-time students. The internship participation rate of full-time students (48.9%) was similar with part-time students (48.5%).

Figure 15. Internship in the Past 12 Months (Yes/No) by Enrollment Status (N=221)

Full-time, at least 12 credits	Yes		92 (48.9%)
	No		96 (51.1%)
Part-time, less than 12 credits	Yes		16 (48.5%)
	No		17 (51.5%)

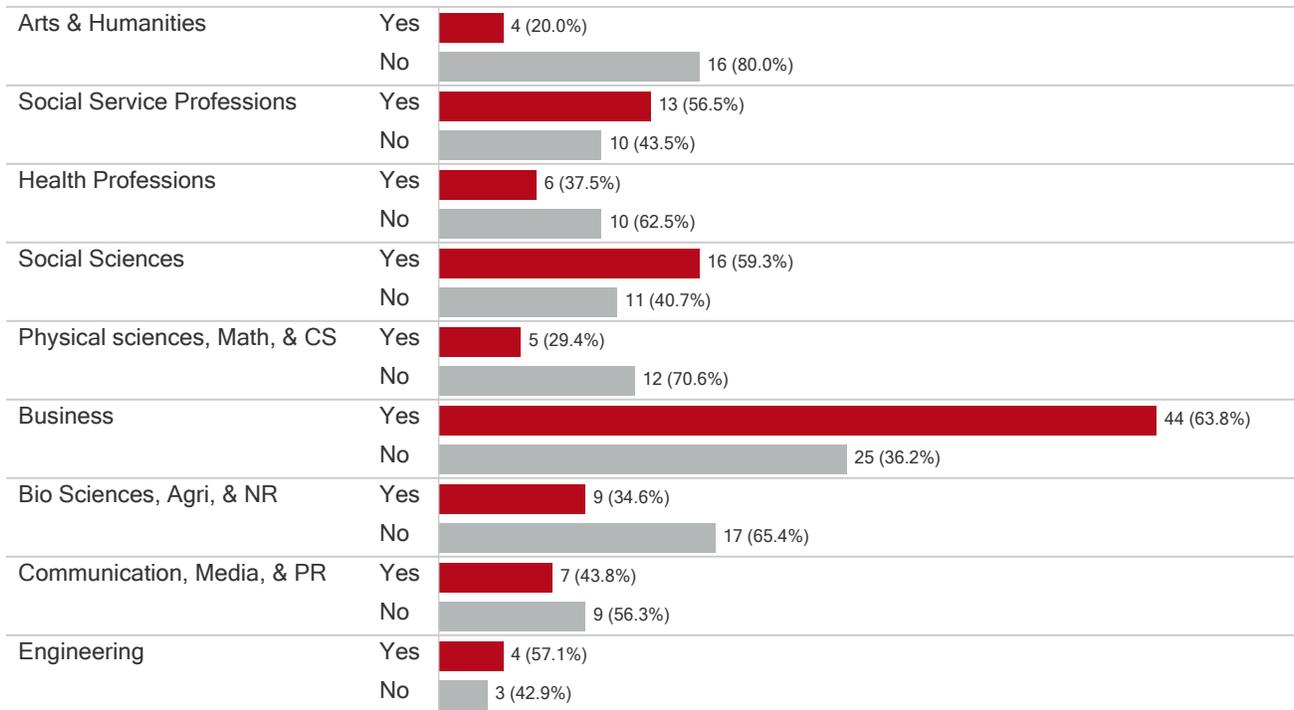
Additionally, we examined internship participation rates by disciplinary sectors. We adopted the major field categories defined by the National Survey of Student Engagement (NSSE, 2018). These results indicate that disciplinary sectors with the largest numbers of students with internships are Business (31.2%), followed by Social Sciences (12.2%), Biological Sciences, Agriculture, & Natural Resources (11.8%), and Social Service Professions (10.4%). A Fisher’s exact test indicated that internship participation rates significantly differ across those program disciplinary sectors, $p = .009$. Business has the highest participation rate (63.8%), followed by Social Sciences (59.3%), Engineering (57.1%), Social Service Professions (56.5%), Communication, Media, and Public Relations (43.8%), Health Professions (37.5%), Biological Sciences, Agriculture, & Natural Resources (34.6%), and Physical Science, Math, and Computer Science (29.4%). Arts and Humanities has the lowest participation rate (20%).

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



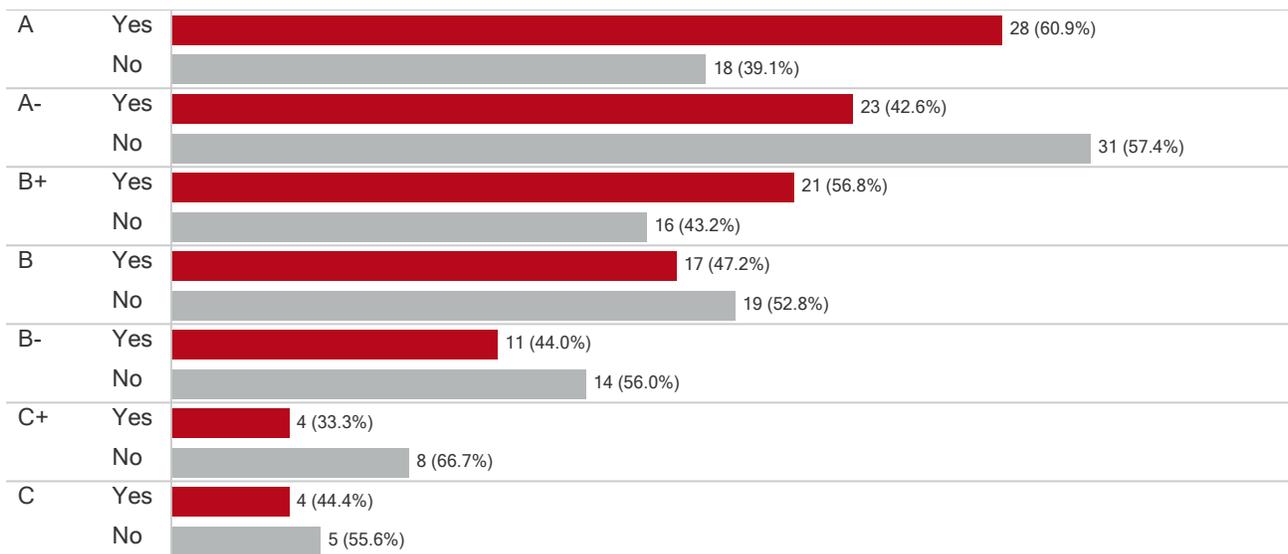
NR = Natural Resources; CS = Computer Science; PR = Public Relations

16.2. Relationship between Internship Participation and Students' Program Sectors (N=221)



Finally, we examined the relationship between participating students' grade-point average (GPA) and internship participation. A Fisher's exact test indicated that internship participation rates significantly differ across those program disciplinary sectors, $p < .001$. However, logistic regression analysis did not indicate GPA as a significant predictor of one's internship participation.

Figure 17. Relationship between Internship Participation and Students' Grade Point Average (N=219)



VII. RESULTS: : Barriers to participation in internships for UW-Oshkosh students

In this section we present findings from the online survey and student focus groups regarding barriers to participation in internships for students at UW-Oshkosh. Access to internships is a critical issue with respect to the problems of inequality and social mobility 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 113 students who did not participate in an internship, 61.9% of them had wanted to do so (see Figure 18). We asked them to rank the various reasons from most important to least important for not pursuing an internship. The findings indicate that many students ranked their heavy course load (n=22), a lack of internship opportunity in their fields (n=19), and a need to work at a current job (n=15) as the most important reasons for not pursuing an internship. For the second ranked reasons, a need to work at current job (n=19) and heavy course load (n=14) had had the highest responses. Additionally, 11 students ranked insufficient pay as the third reasons (see Figure 19.2). In general, 74.3% of students consider a heavy course load as a barrier, 64.2% for a need to work at current job, 61.3% for a lack of internship opportunity, 54.3% for insufficient pay offered, 41.4% for a lack of transportation, and 28.6% for a lack of childcare (See Figure 19.1). 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 = 113)



Figure 19. In the past 12 months, why were you not able to pursue an internship?

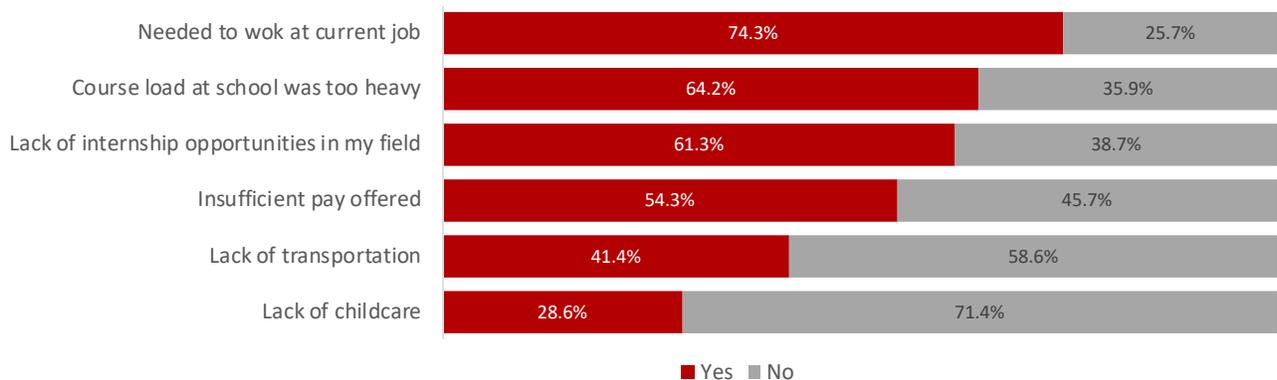
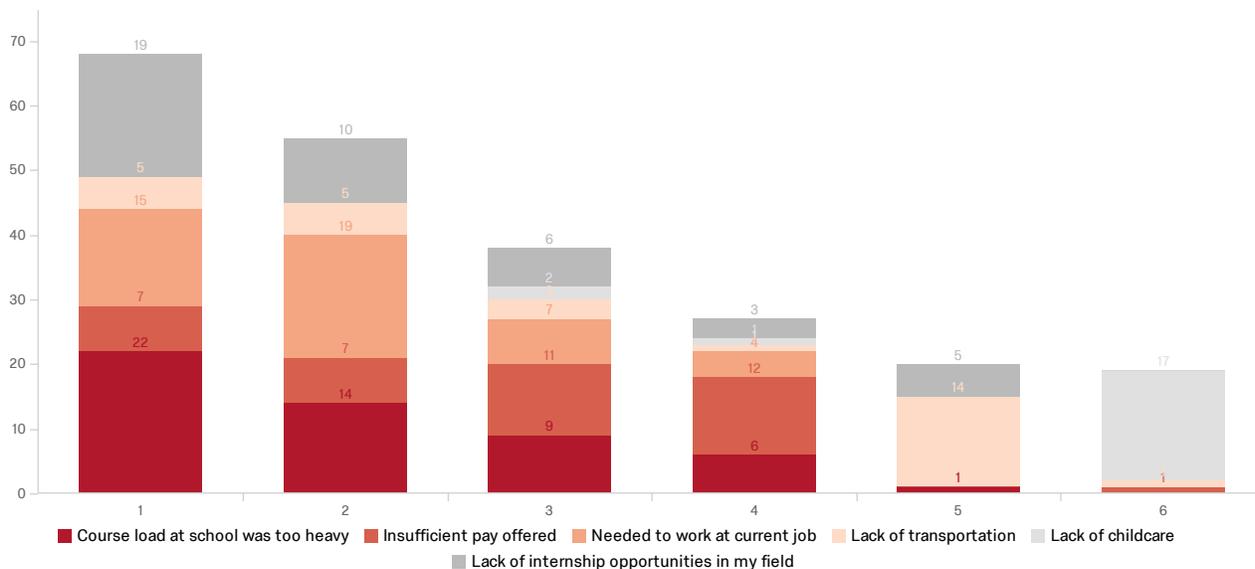


Figure 19.2. Rank the reasons from most important to least important for not pursuing an internship.



Focus group: What were students' concerns and difficulties in participating in internships?

In addition to these results from our online survey, we held 13 focus groups with 19 students at UW-Oshkosh, and the students discussed their concerns and difficulties to participate in internships.

Table 4. UW-Oshkosh Student Concerns and Difficulties in Participating in Internships (n=19)*

Concern/Difficulty	Examples
Challenges finding or obtaining an internship	Issues finding an internship, navigating the campus requirements, limited availability of internships by field; issues with internship tasks and relevance to their career trajectory
Financial considerations	Issues with the need for financial stability, inability to take unpaid internships
Scheduling problems	Issues with scheduling internships to coordinate with paid work, academic coursework, and other responsibilities
Lack of needed skills	Lack of needed skills to succeed in internship placement

*This sample includes all focus group participants from UW-Oshkosh; these difficulties include those that were discussed most frequently, in descending order of frequency

Students discussed several barriers to their participation in internships: challenges finding or obtaining a placement, financial considerations, scheduling problems, and a lack of needed skills (Table 4). Some students struggle to find internship placements that were relevant to their field or career trajectory, as one student explained, “I guess I don't

really hear of opportunities that often.” When opportunities are available, the same student noted that, “I don’t always feel qualified for them;” and so they decided to not apply for internships. Two students in a focus group agreed with this general assessment, and in particular, felt that many internships tended to require prior relevant experience which they lacked—and they thought this was ironic because their perception was that internships were themselves primarily a way for students to gain experiences (i.e., the catch-22, *you need experience to gain experience*). For example, one student lacked the transportation needed to obtain volunteer experiences—which she felt was needed to obtain an internship—and this situation “... kind of discourages me from applying altogether.”

Students also consider financial implications to varying degrees. Several students expressed that they could not accept an unpaid or inadequately paid internship. Furthermore, students discussed how some internships pose financial considerations because they require additional transportation and living expenses. One student, for example, decided to decline a highly desirable summer internship placement in the mining industry; not only was the internship unpaid, but there were also substantial relocation and living expenses for the summer which, in total, forced the student to accept a (high quality yet academically unrelated) internship on campus rather than his “dream internship.”

Related, students discussed the challenge of internship scheduling, which requires coordinating the internship with needed paid work and academic coursework; as one student characterized it, having to schedule “back-to-back-to-back.” Because certain paid employment positions required fixed or inflexible scheduling requirements, students occasionally had concerns that scheduling conflicts on account of an internship might put their jobs at risk. Students also needed to coordinate the scheduling constraints of regular paid work with full-time academic class schedules and study time; and for some students adding the scheduling requirements of an internship seems overwhelming, as one student explained:

I would just say ... being in school and also having to do the internship [is an obstacle], because there were a lot of opportunities that they were offering me but I couldn't [accept], because I had class at that time or I had to go to work.

Some of the students who felt this way discussed a strategy of applying for internships during the summer, when they would have a lighter or no academic workload.

Last, students expressed concerns about not having the skills needed to succeed in an internship. One student, for example, felt unprepared because her supply chain management internship required knowledge of Excel and that it was difficult to catch up during the internship because, “Obviously you get a lot of material thrown at you and you’re kind of trying to juggle everything.” Students who had not done an internship expressed the concern that they were unsure what skills are needed to succeed in a potential internship, as one student stated about an internship he found online, “And so I would have no idea if I would even have the skills needed or the know-how to do well for them in that internship.” Students were also concerned that supervisors may be unable or unwilling to train them, and they might be assigned low-quality work, “They might think of you as just like a coffee person or a go do this, go get that [person].”

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

In this section we present findings regarding the types of internship programs that students at UW-Oshkosh have taken, and their experiences during their internships. 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 108 students at UW-Oshkosh in our study sample that had taken an internship in the past year, 63% of them did so at a for-profit company, with the remainder at government agencies (15.7%) and non-profit organizations (21.3%). Many of these internships were concentrated in fields such as Finance and Insurance (15.7%), Other Services (21.3%). Many of these internships were concentrated in fields such as Finance and Insurance (15.7%), Other Services (15.7%), Health Career and Social Assistance (13.9%), and Manufacturing (11.1%), etc.

Figure 20. In what type of organization did you participate in this internship? (N = 108)

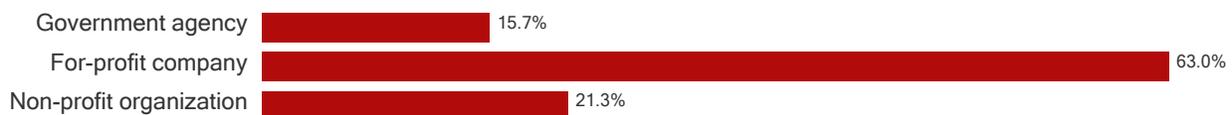
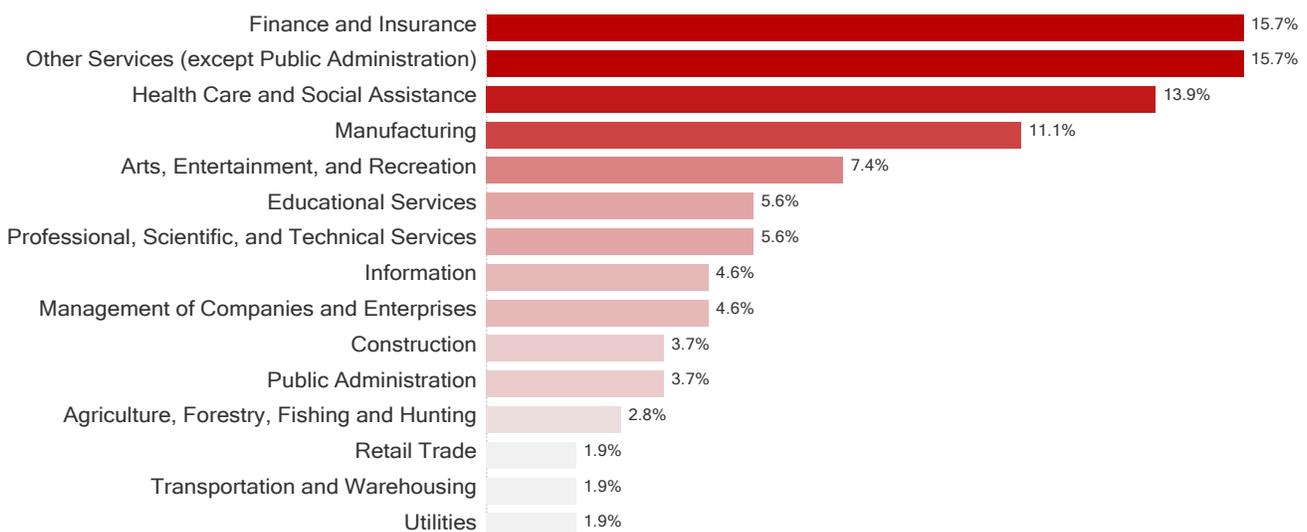


Figure 21. In what industry or field was this internship in? (N = 108)



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 22. For how many weeks did you participate in this internship? (N = 108)

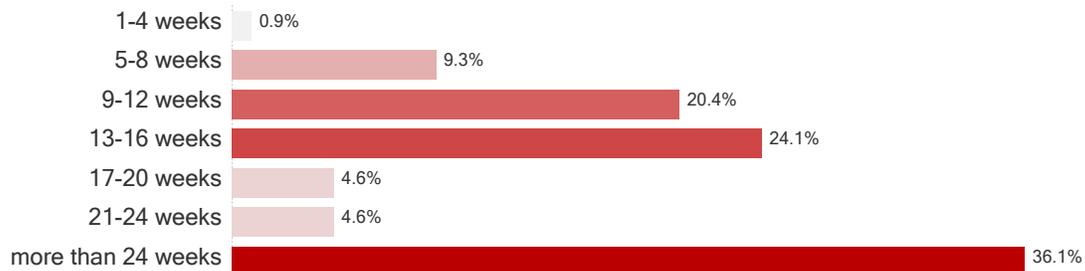


Figure 23. Was the internship paid or unpaid? (N = 108)

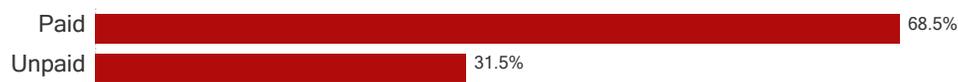


Figure 24. Hourly compensation of internships (N = 24)



These results indicate that the largest proportion of survey respondents who had taken an internship did so for more than 24 weeks (36.1%), 13-16 weeks (24.1%), and 9-12 weeks (20.4%). Approximately 9.3% participants having had an internship experience that lasted less than 9 weeks (Figure 22). Further, 68.5% of these students were compensated for their internship work, whereas 31.5% were not (Figure 23). Most of the students (79.7%) reported that they were paid hourly. The average hourly payment is \$14.29, which is above the estimates of living wage for one adult in the city of Oshkosh (\$11.27) (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 UW-Oshkosh 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 UW-Oshkosh students who participated in an internship, 60.2% felt that their internship was very or extremely related to their academic coursework (Figure 25). In addition, 54.6% of the students reported that their

academic program staff and internship supervisors collaborated very well or extremely well 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 = 108)

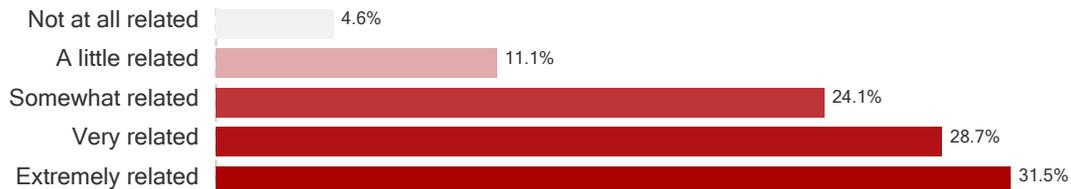
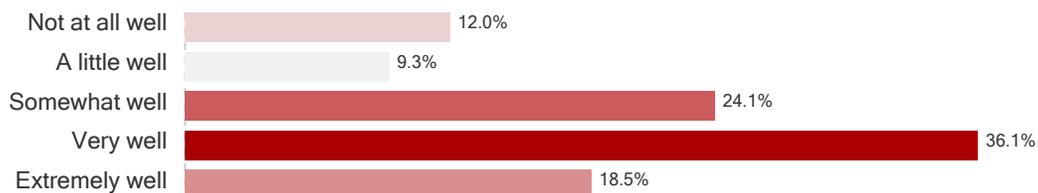


Figure 26. How well did your internship site supervisor and your academic program staff coordinate with one another? (N=108)



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 with a five-point Likert scale from 1=Not at all to 5=A great deal (M=4.25, SD=0.8): 1) In this internship, how much did your supervisor care about your well-being? 2) In this internship, how much did your supervisor care about your satisfaction at work? 3) In this internship, how much did your supervisor appreciate the amount of effort you made? 4) In this internship, how much respect did you feel you received? Below we report results from two of these items as examples. Among UW-Oshkosh students who had recently completed an internship, 83.4% reported that their supervisors cared about their satisfactions at work to a great deal or quite a bit, and 87% reported that their supervisors appreciate the amount of effort they made to a great deal or quite a bit; both are important indicators of supervisory support (Figure 27).

Figure 27. In this internship, how much did your supervisor care about your satisfaction at work? (N = 108)

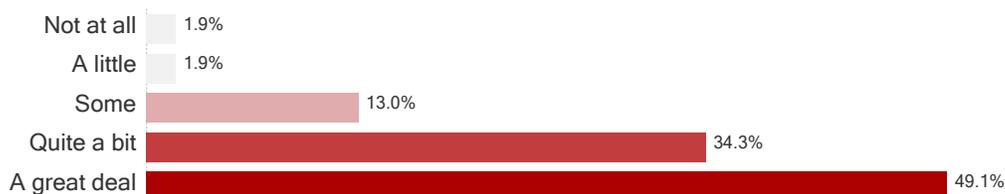


Figure 28. In this internship, how much did your supervisor appreciate the amount of effort you made? (N = 108)



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 with a five-point Likert scale from 1=Never to 5=Extremely often (M=3.4, SD=0.89): 1) How often did your supervisor suggest specific strategies for achieving career goals? 2) How often did your supervisor encourage you to try new ways of behaving in the job? 3) How often did your supervisor give you feedback regarding job performance? 4) How often did your supervisor give you assignments that presented opportunities to learn new skills? 5) How often did your supervisor help you finish tasks or meet deadlines that otherwise would have been difficult to complete? Below we report results from two of these items as examples. UW-Oshkosh students reported that most supervisors provided feedback sometimes (31.5%), very often (21.3%), or extremely often (10.2%). It is concerning that nearly a quarter of the supervisors failed to encourage students to try new ways of performing tasks at the internship site and 14.8% of the students reported not receiving adequate feedback regarding their performance (see Figure 29, 30).

Figure 29. How often did your supervisor encourage you to try new ways of behaving in the job? (N = 108)

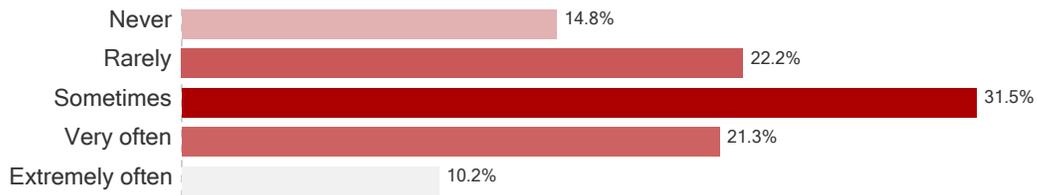
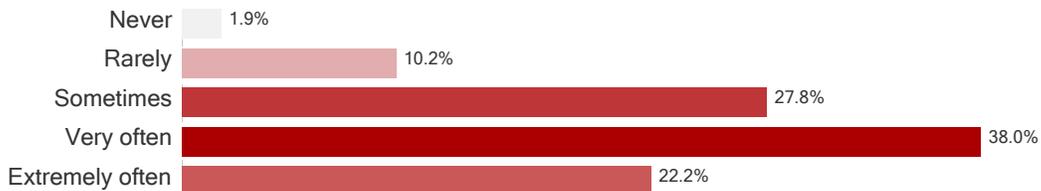


Figure 30. How often did your supervisor give you feedback regarding job performance (N=108)



Goal clarity

Clear expectations regarding work products and how they are evaluated are 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 with a five-point Likert scale from 1=Not at all clear to 5=Extremely clear (M=83.63, SD=0.98), and below we report results from these items (see Figures 31, 32).

The results indicate that 65.7% of participating UW-Oshkosh students taking internships felt that they were given clear objectives and 66.7% 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 = 108)

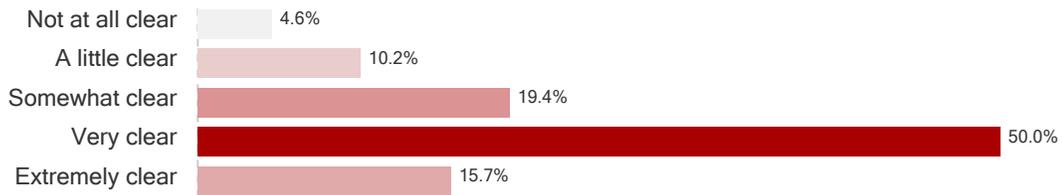
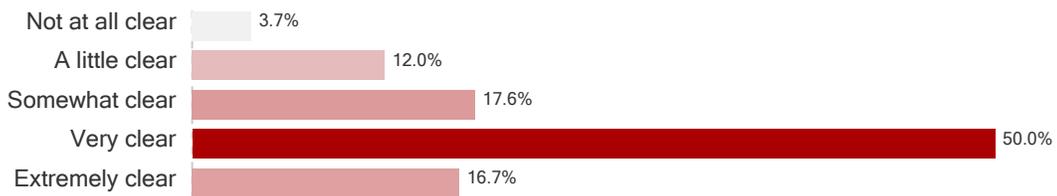


Figure 32. In this internship, how clear was the explanation of what you needed to accomplish? (N = 108)



Task autonomy

Besides benefiting from clearly defined tasks, interns also report 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 with a five-point Likert scale from 1=None to 5=A great deal (M=4.29, SD=0.79), and below we report results for these items (see Figures 33, 34). For UW-Oshkosh students, 88% reported having considerable flexibility in how they completed their work and 80.6% 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 = 108)

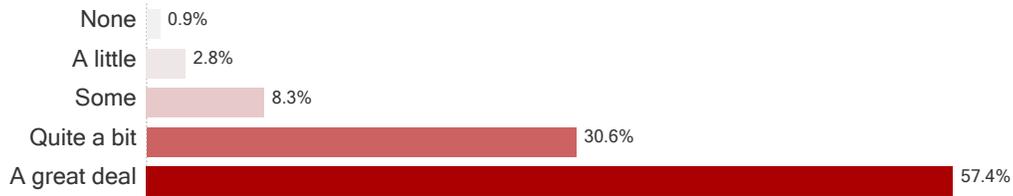
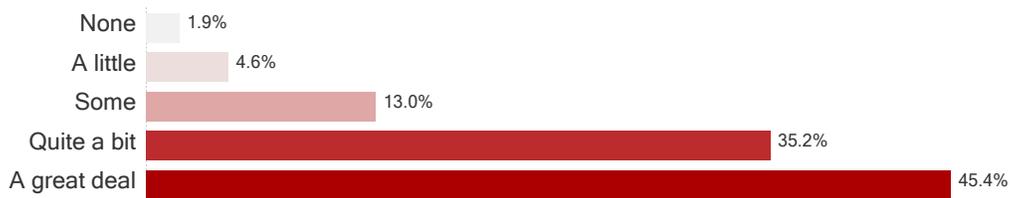


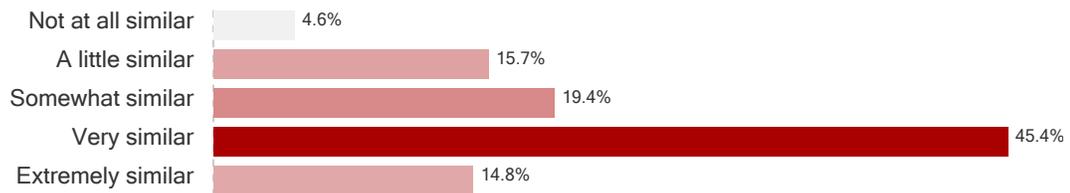
Figure 34. In this internship, how much freedom did you have to decide how to do your work? (N = 108)



Task similarity to entry-level employment

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, Wolfram & Thompson, 2017). This construct was measured using one question with a five-point Likert scale from 1=Not at all similar to 5=Extremely similar (M=3.5, SD=1.07). The findings indicated 60.2% of the participating UW-Oshkosh students considered their internship tasks to be very similar or extremely similar to those in entry level employment. Answers to this question have implications for both compensation and the meaningfulness of the work itself. There were 20.3% of participating UW-Oshkosh students considered their internships tasks not at all similar or a little similar to an entry-level employment (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 = 108)



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

Table 5. UW-Oshkosh Student Experiences in Internships (N=9)*

Relation to Academics	
Highly Related	Used what was learned in class at the internship; entered internship with the skills needed to succeed.
Somewhat Related	Standards and principles similar between courses and internship, but application in new area; needed to learn some additional techniques or skills
Not Related	Internship experience entirely separate; totally new skills, area of focus, or both.
Supervision	
Autonomous	Fully autonomous; worked on tasks separate from supervisor; limited training, guidance, or feedback on tasks
Semi- Autonomous	Supervisors present, provided feedback when necessary and training when needed but not on a regular basis.
Highly Supervised	NA—was not reported by students at the UW-Oshkosh.
Mentoring/feedback	
Lack of mentoring	Mentoring occurred infrequently or not at all.
Mentoring relationship	Mentoring occurred regularly, with a particular person who was designated to provide mentorship and advice.
Corporate mentoring	Mentoring was provided by various members of the professional staff

Notes. *This sample only includes those UW-Oshkosh focus group participants who had internships

Students' experiences in internships during their time at UW-Oshkosh varied in terms of the internship's relationship to academics, supervision, and the presence and quality of mentoring. In terms of the internship's relationship to their academic coursework, most students felt that their internship experience was highly related; although there were a few who felt it was either somewhat or not related. Participants who felt that their coursework was related gave examples of specific courses and academic content that they had the opportunity to apply in their internships (e.g., studying about particular chemical processes in class; conducting water quality tests that are based on those particular chemical processes in the internship). And several students mentioned the relevance of "professional skills courses," as one student explained, "That was handy, because that's about how to navigate business culture, and etiquette." In contrast, students who stated it

was less related discussed needing to learn particular technical skills for their internship, such as how to operate a software program; a few students stated that the internship was in a field that was completely dissimilar to their academic area (in those cases, they had chosen to accept the unrelated internship because they had struggled to find a placement that was more suitable).

Supervision ranged from interns being relatively unsupervised and highly autonomous, to being supervised but still semi-autonomous. On the unsupervised and highly autonomous end of this range, some students described themselves needing to identify work tasks without their supervisor's direction, or not knowing who specifically in the organization was their supervisor. In cases where there is a supportive, open, collaborative office culture—and where the intern's workspace is proximate the professional staff—this situation can result on a positive experience, where the student is more-or-less supervised by the various nearby staff. In other cases, interns who lacked a clearly identified supervisor felt confused about their work tasks and about the larger significance of their work for the organization. On the supervised yet semi-autonomous end, students described being provided work tasks or a project, and the supervisor was available to answer questions and provide feedback as needed. A few students also described more involved training and feedback at the start of the internship, which rapidly decreased as the intern was able to work independently. Other students discussed having a pair of supervisors, one who supervised day-to-day work tasks, and the other who oversaw the intern's progress on the project overall. The participants in the focus groups did not report highly supervised internships, with daily, regular, or mandatory training sessions and meetings to provide directions and evaluations of the work.

There was also considerable variation in the presence and quality of mentoring experienced by students during their internships. A few students said that they received no mentorship at all, in particular, because their supervisors and other staff were too busy with other work (and these students regretted this aspect of their internship experience). Some students who were not provided a mentor at their internship site took proactive measures to obtain mentorship from busy coworkers, such as a creative strategy that one student explained:

And actually, when I left, probably the most mentorship like thing, I just sent a quick email thanking everyone for everything and asked them to send me, you know, if you were 21 again, what would you do? And I got some really good responses back ... interesting stuff.

Other students described high quality and supportive mentoring relationships with their supervisors or with other professionals at their internship sites—involving open access to a mentor to ask questions, with supportive feedback on the work and advice on career preparation provided, with regular opportunities to shadow mentors and attend team meetings, with being invited to office social activities, and with helpful clues discussed about unspoken yet important norms of the office culture. Lastly, several students described a kind of corporate mentoring, receiving mentorship from numerous supervisors and professional staff at the internship site; e.g., “But my goal in the internship was to try to make a mentor, so to speak, to some extent out of everyone.”

IX. RESULTS: Outcomes of internships

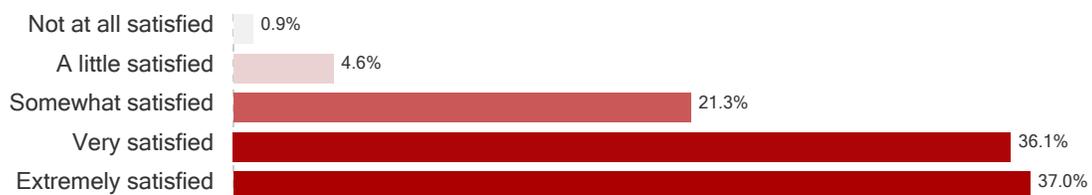
The impacts that internships have on students appears as one of the most important questions facing the field of higher education and workforce development, given their growing prominence in educational policy and programming. In empirical research on internships, this question is answered by tracking 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 UW-Oshkosh for at least one additional year, with these questions being addressed in the Spring of 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 knowledge, skills, and 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 overall satisfaction and asked students to rate from 1=Not at all satisfied to 5=Extremely satisfied ($M=4.04$, $SD=0.93$), and 73.1% of UW-Oshkosh participating students reported that they were very or extremely satisfied with their experience. This high percentage of student satisfaction is quite promising; but the fact that 21.3% were only somewhat satisfied and 5.5% were not satisfied with their internship indicates that there remains work to be done to improve internships for some students (see Figure 36).

Figure 36. How satisfied were you with your internship experience? (N = 108)



To investigate the relationship between internship program features and students' internship satisfaction, we conducted correlation and multiple regressions analysis. Please see Table 1 in Appendix B for the correlation and multiple regression results. The results indicate that supervisor support, mentoring, goal clarity, relatedness to academic program, autonomy, and similarity to an entry-level employment positively and significantly correlate with students' internship satisfaction with coefficients ranging from .33 to .55.

The multiple regression model with program features produces $R^2 = .55$, $F(18, 87) = 8.01$, $p < .001$. Supervisor support, supervisor mentoring, goal clarity, and relatedness to academic program had significant positive regression weights, indicating students with higher scores on these variables were expected to have greater satisfaction, after controlling for the other variables in the model. Autonomy and similarity to entry level employment did not contribute to the multiple regression model. Finally, we can use this equation to compute predicted satisfaction scores: Satisfaction = $0.22 * \text{supervisor support} + 0.31 * \text{supervisor mentoring} + 0.2 * \text{goal clarity} + 0.28 * \text{relatedness to academic program}$.

Developmental value of the internship experience

Next, we examine the impact of program structure on another important outcome of internships – students’ perception of how much their internship experiences have influenced their academic learning and career development (i.e., developmental value). The Developmental Value scale was developed based the work by McHugh (2017) and Nghia & Duyen (2019), which consists of 11 items of two subscales using a 5-point scale from 1=none to 5=a great deal: a) developmental value of academic learning with 6 items (M=3.8, SD=0.85); b) developmental value on career development with 5 items (M=3.77, SD=0.86).

The first scale was measured using five items: 1) The internship gave me opportunities to consolidate the knowledge that I have learned in my college coursework. 2) The internship gave me opportunities to apply knowledge from my coursework to real-world situations. 3) The internship gave me opportunities to identify academic knowledge gaps that need to be filled. 4) The internship helped me recognize what I should focus on studying in my program. 5) The internship motivated me to change from theory-focused to practice-focused learning. The second scale was measured by five items: 1) The skills I learned at this internship are important for my career development. 2) The internship helped me clarify my career objectives. 3) The internship gave me opportunities to learn new information or skills. 4) The internship offered me an opportunity to secure a job prior to my graduation. 5) The internship helped me identify some companies where I can apply and get a job. 6) The internship increased my beliefs about my abilities to pursue future career opportunities. We report below the results from two items of each subscale as examples (see Figures 37-39). For example, the findings indicate 75% of the UW-Oshkosh participating students considered their internships to be providing “quite a bit” or “a great deal” opportunities for them to apply knowledge from coursework to real-world; and 71.3% reported internships are valuable in terms of providing “quite a bit” or “a great deal” opportunities for them to identify academic knowledge gaps. In addition, when reflecting the value of the internship to career development, 76.8% of participating UW-Oshkosh students rated the skills they learned at internships are “quite a bit” or “a great deal” important for their career development, and 76.8% reported that their internships “quite a bit” or “a great deal” helped clarify their career objectives.

Figure 37. The internship gave me opportunities to apply knowledge from my coursework to real-world situations. (N = 108)

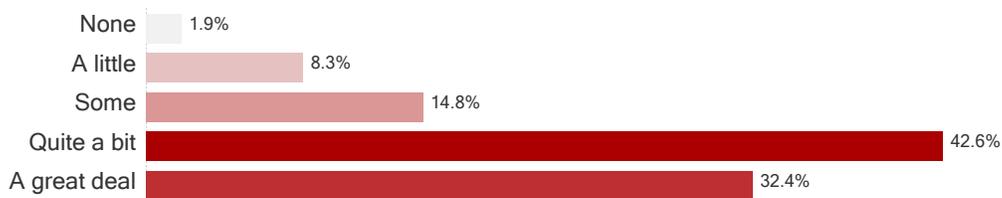


Figure 38. The internship gave me opportunities to identify academic knowledge gaps that need to be filled. (N =108)

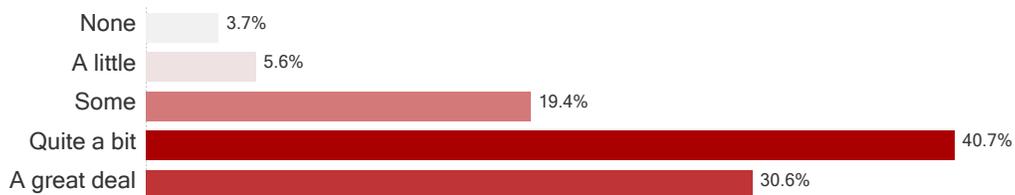


Figure 39. The skills I learned at this internship are important for my career development. (N = 108)

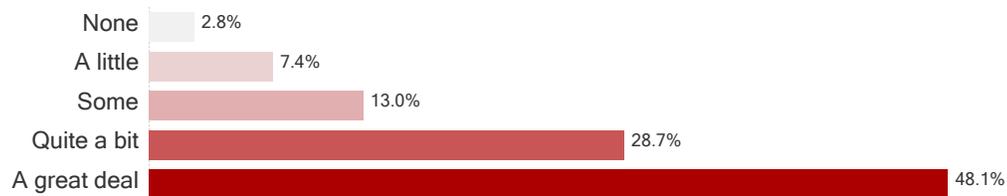
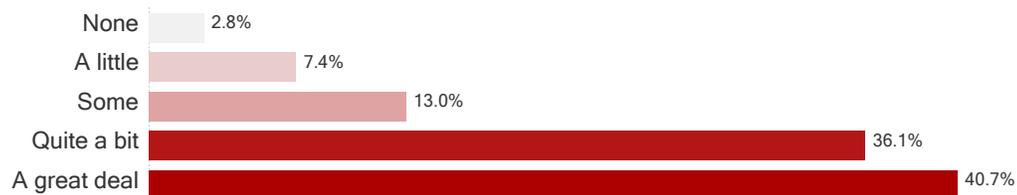


Figure 40. The internship helped me clarify my career objectives. (N = 108)



To investigate the relationship between internship program features and students’ internship satisfaction, we conducted correlation and multiple regressions analysis. Please see Table 2 in Appendix B for the correlation and multiple regression results. The results indicate that supervisor support, mentoring, goal clarity, autonomy, relatedness to academic program, and similarity to an entry-level employment positively and significantly correlate with students’ perceived internship developmental value with coefficients ranging from .30 to .56.

The multiple regression model with program features produces $R^2 = .52$, $F(18, 87) = 7.21$, $p < .001$. Supervisor mentoring and relatedness to academic program had significant positive regression weights, indicating students with higher scores on these two variables were expected to perceive a higher level of developmental values of their internship experiences, after controlling for the other variables in the model. Supervisor support, goal clarity, autonomy, and similarity to an entry-level employment did not contribute to the multiple regression model. Finally, we can use this equation to compute predicted satisfaction scores: $\text{Development value} = 0.34 * \text{supervisor mentoring} + 0.33 * \text{relatedness to academic program}$.

Then we looked at developmental value to academic learning and career development respectively. Results shows that supervisor mentoring ($\beta = .32$, $p = .002$) and relatedness to academic program ($\beta = .37$, $p = <.001$) significantly predict one’s perceived developmental value to academic learning, $F(18, 87) = 5.36$, $p < .001$, $R^2 = .43$. Likewise, supervisor mentoring ($\beta = .30$, $p = .004$) and relatedness to academic program ($\beta = .22$, $p = .015$) can significantly predict one’s perceived internship developmental value to career development, $F(18, 87) = 5.35$, $p < .001$, $R^2 = .43$.

Finally, multiple regression models of career adaptability and outcomes indicated significant predicting role of career adaptability on both perceived satisfaction ($\beta = .30$, $p = .004$) and development value ($\beta = .44$, $p < .001$). Compared with satisfaction model, $F(13, 92) = 1.14$, $p = .33$, $R^2 = .02$, developmental value model showed a better overall significance, $F(13, 92) = 4.32$, $p < .001$, $R^2 = .30$.

These results indicate that there are a variety of structural 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

Table 6. UW-Oshkosh Perceived Outcomes of Internship Participation (N=9)*

Outcome	Examples
Resume boosting	Experience that makes students look better as applicants to employers
Gaining self-confidence	Overcoming personal self-doubt about one's abilities to perform in the workplace or profession
Gaining skills and experience	Gaining experience that is different from classroom, hands-on practice in the field, experience in a work setting with people; learning and practicing skills specific to the field or job
Exploration of field	Narrowing focus for specific career goals and trajectories; exploring the specific environments, skill sets, or workplaces

*This sample only includes those UW-Oshkosh focus group participants who had internships; outcomes are listed in descending order of frequency

What do UW-Oshkosh students gain from their internships? As one student cogently summarized, “The experience, the connections, the competency, the relevant claim to any employer that I have this, that I am able, that I’m capable of doing any kind of a job.” Students described how the internships affected them, most often discussing that their experience helped them boost their resume, gain self-confidence, gain skills and experience, and explore the field (Table 6). The students at UW-Oshkosh most emphasized the potential of an internship to confer a competitive advantage on the post-graduation job market by boosting their resume; as one student explained, “what I gained from ... [my internship] is putting something on a resume; I think it does look good.” One student felt that including an internship on a resume indicates positive personal qualities that would be attractive to a potential employer: “Look at how motivated I am, how driven I am!” Others argued that their internship sets them apart from other students—students who may have better grades or may attend a more prestigious university—conferring a competitive advantage in the competition for prized employment or graduate school admissions.

Students also emphasize that their internships helped them gain confidence, as one student explained, “So this internship just continues to help build my confidence, my capabilities, my belief that my own success is possible.” One student provide a compelling a description of how her internship helped her to overcome insecurities that she identified as a consequence of her first-generation college background:

I definitely gained a lot of confidence. That was something that was, that it really empowered me, because I grew up in a family that ... neither of my parents had gone to college. One of my parents didn't even go to high school. And so, it was something that really empowered me to kind of realize that I was doing, I guess, research and looking into this information and working in a field that was so, I guess, beyond what I had grew up from. And so, yeah, I felt really empowered.

Another student described how the interviewing process for obtaining an internship helped him to feel more prepared and confident as he prepares for regular job interviews.

Related, students commonly identified acquiring new skills and on-the-job experience as an important outcome of their internship. These included gaining technical skills such as knowledge of particular software or worksite processes, acquiring

knowledge of the culture of the profession or the worksite, and developing communication, teamwork, and leadership skills. Lastly, several students offered examples how the knowledge they gained about their professional field in their internship helped them to adjust their career goals; as one student explained, “In all the internships, like they’ve definitely helped with ... knowing what I want to do and what I don’t want to do.” Several students echoed this sentiment that internships provided insider knowledge into the profession, which was needed to better inform their career planning and decision-making.

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 UW-Oshkosh.

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 2-17 there is considerable social-economic variation among the students at UW-Oshkosh in our survey, including demographic characteristics, life circumstances, and features of academic programs that may impact students’ ability to access an internship experience, especially parental income (Figure 6), employment status (Figure 7), academic program enrollment status (Figure 15), academic disciplinary sector (Figure 16.2), and GPA (Figure 17). Students in the focus groups highlighted the issue of financial considerations as a factor affecting their internship participation (Table 4). For their part, students should actively search for resources, connections and assistance such as utilizing connections between their academic program and potential employers, disclosing financial difficulties, asking 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, 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 supervision quality that they receive and actively establish effective communication and professional development opportunities as an intern.
- Although one’s internship satisfaction and perceived contributions to one’s development could be limited by many contextual factors, students ought to treat an internship as an opportunity for personal and professional development, no matter if the internship is required or elective. Table 5 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 should 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 to 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).

What faculty and institutions can do

Faculty and staff are people who guide the students to know about the world of work and the career future of a major. They play a critical role in building the academic foundation for students' future career, connecting the students to employers, and cultivating students' work ethic. The following suggestions can facilitate high quality internship programs:

- Institutional leaders at UW-Oshkosh 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 mandating internships across the entire institution. Moving forward, UW-Oshkosh could benefit from a centralized system for reporting internships to the Office of Career & Professional Development, which could yield useful information about how internships are conducted and which could be used to continuously improve practices across campus.
- Given that some social and economic needs of students at UW-Oshkosh, such as maintaining an employment and balancing between employment and coursework, may be an obstacle to participating in an internship (see Figures 2-17 & Figure 19), staff should understand and advocate for students' if they disclose such needs and also attend to students' mental health. For students who choose not to do an internship, staff can communicate with them to understand their reasons and seek resources to resolve problems. Additionally, academic programs can maximize opportunities to discuss students' acquisitions of career-relevant skills in their main paying jobs. For example, some typical internship activities could be provided to students with full-time jobs at their academic programs.
- Students indicated a lack of internship opportunities and challenges of finding a relevant internship (Figure 19 & Table 4). 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. It would also help if staff made sure to post all internship opportunities on Handshake so that they are made available to all students.
- Factors such as an internship's relevance to the student's academic program, the quality of supervisor support and mentoring, and the clarity of goals are predictors of students' perceived internship satisfaction and developmental value. In addition, student focus groups described quality supervision and mentorship and the internship's relevance to the student's academic program as important features of their internship experiences (Table 5). 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.
- Staff who have not yet been trained on the state and national laws that apply to internships should do so. The Office of Career & Professional Development would be a good resource for providing this training to ensure that UW-Oshkosh is compliant.

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 who are planning to host internships should attend to the following:

- In addition to the labor and recruitment goals that employers may have for their internship program, internships should primarily be considered as an educational and developmental opportunity for the students. Quality of supervisor support and mentoring, goal clarity, and the relevance to academic program are important predictors of student internship satisfaction; and supervisor mentoring and the relevance to academic learning are important predictors of one's perceived developmental value. Employers can enhance this opportunity by carefully designing internship programs to include 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 is a predictor of student satisfaction. Supervisors can allow for some task autonomy for their interns by encouraging their creativity, but still provide clear objectives and explanation as well as structured guidance about what interns need to accomplish. Supervisors are encouraged to provide periodic feedback to interns that highlights their progress and accomplishments, while also pointing out shortcomings and proposing action plans for improvement.
- The relevance of the internship experience to the academic program serves as a critical predictor of positive student outcomes. The academic relevance of the internship was also emphasized by the students in the focus groups (Table 5). Educators and 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 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 2019 (T1) and then 12 months later in the Spring of 2020 (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 2019; 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 practicum (e.g., education and nursing fields). 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 also completing a college degree, certificate, or diploma program. It involves working in a position clearly designated as an "internship" by the host 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.

Descriptive statistics and Cronbach alpha coefficients of the measuring instruments

Item	Mean	SD	α
Supervisor support	4.25	0.80	0.89
Supervisor mentoring	3.40	0.89	0.84
Goal clarity	3.63	0.98	0.92
Task autonomy	4.29	0.79	0.70
Relatedness to academic program	3.71	1.16	
Similarity	3.50	1.07	
Satisfaction	4.04	0.93	
Development value		0.90	0.78
Career adaptability composite	3.65	0.94	0.63
Concern	3.72	0.87	0.79
Control	3.70	0.83	0.72
Curiosity	3.43	0.83	0.78
Confidence	3.77	0.88	0.72

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 participated in the focus group at T1 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=10 students in 6 groups) and those who have not (N=9 students in 7 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.

Lastly, we conducted an audio-recorded interview with educators, career advisors, and employers UW-Oshkosh who supports student internships. A list of potential recruits from among the UW-Oshkosh staff and area employers was provided by our colleagues at UW-Oshkosh. 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, the interview participant completed a free-list exercise and discussed their responses. The educator interview 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 free-list 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 Anthropic 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 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 focus groups and interviews based on the questions in the protocol. Both researchers practiced with the protocol and coded a set of transcripts in parallel; and the few discrepancies that were identified were resolved and the rest of the transcripts 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 UW-Oshkosh. 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 correlations and multiple regression analysis of internship program features and students' internship satisfaction

Predictor	Correlation with Satisfaction	Multiple Regression Results	
		β	p
Supervisor support	.55***	.22*	.029
Supervisor Mentoring	.51***	.31**	.001
Goal Clarity	.53***	.20*	.022
Relatedness to academic	.43***	.28***	<.001
Task autonomy	.36***	.10	.216
Similarity to an entry-level employment	.33***	.03	.693

Dependent variable: Internship satisfaction

Independent variables: supervisor support, mentoring, goal clarity, relatedness with academic program, autonomy, similarity to an entry-level

Control variables: gender, race, academic program, GPA, employment status,

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

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

Table 2. Results of correlations and multiple regression analysis of internship program features and students' development value

Predictor	Correlation with Development Value	Multiple Regression Results	
		β	p
Supervisor support	.38***	-.02	.819
Goal Clarity	.52***	.34**	.001
Supervisor Mentoring	.41***	.09	.337
Link between academic program and internship	.56***	.33***	<.001
Task autonomy	.30**	.10	.193
Similarity to an entry-level employment	.42***	.13	.119

Dependent variable: Perceived development value

Independent variables: supervisor support, mentoring, goal clarity, relatedness with academic program, autonomy, similarity to an entry-level employment

Control variables: gender, race, academic program, GPA, employment status,

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

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



Note: 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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