Internships and other forms of work-based learning are increasingly viewed as essential experiences for college students to develop transferable skills, apply academic knowledge to authentic situations, develop professional networks, and to facilitate their socialization and entry into the professions. While online or virtual internships—which can vary according to their duration, structure, and activities—have recently been growing in prominence, the Covid-19 pandemic brought considerable interest in these unique types of internships, as many in-person positions were cancelled or shifted online. Yet little empirical research exists on the prevalence, quality and commitment to equity and access among online internships in the U.S., particularly during the pandemic period of 2020 to early 2021.

In this multi-site case study we collected survey and interview data from college students during this tumultuous period. Our findings focus on three distinct cases: (1) two independent websites that provide online internship networking platforms (OINP) for students seeking online internships and employers seeking student interns (n=183 surveys, n=45 interviews), (2) 11 colleges and universities (n=9,964 surveys), and (3) a single employer-hosted online internship program at TreeHouse Foods, a multi-national firm engaged in manufacturing and distributing private label food and beverage products. In analyzing and interpreting our data, we used CCWT’s Internship Scorecard (Hora et al., 2020a) framework that provides a structured approach to studying internships, as well as insights from research on remote work and digital learning.
One of our primary conclusions is that while considerable variation exists within the world of internships writ large, an added layer of complexity exists for online positions with respect to IT, internet access, work-life boundaries, and challenges associated with online or remote work that many occupations have experienced during the Covid-19 pandemic. We argue that these additional concerns and factors make online internships—which are unlikely to disappear post-pandemic—a top priority for improvement, equitable access, and quality control in the field of higher education.

Our key findings, which are outlined below, should be interpreted with caution as they do not reflect all types of online internships and also do not reflect a random and/or representative sample of students in the 11 institutions included in our study or of all college students in the U.S.

**Finding #1: Internship participation was rather low during the COVID-19 pandemic, with interns roughly split 50/50 between online and in-person modalities**

Of the 9,964 students from 11 campuses answering our survey from the NSCI, one of the biggest findings is the large number of students (77.9%, n=7,761) who did *not* take an internship. Of the 22.1% (n=2,203) students who did take one, our key finding is that 45.3% (n=993) had taken an online internship, with 47.6% (n=1,044) having had an in-person experience. These findings indicate that overall participation in internships during the pandemic was rather low, with only 1 in 5 students successfully completing an internship. Further, contrary to conventional wisdom that most (if not all) internships were online during the pandemic, our data show that as many students took in-person internships as they did online positions.

These results on internship participation are similar to our 13-institution dataset for the College Internship Study, where interns and non-interns reflect 30% and 70% of that study sample, respectively, but these more recent data do indicate a decline in overall internship participation in comparison with those earlier data (2017-2019).
Finding #2: Online internship networking platforms (OINPs) play an important role in the ecosystem of internship opportunities, but during the pandemic student demand outstripped the supply of available positions

Another key finding pertained to the role that OINPs played during the pandemic, with some arguing that they would fill an important gap in providing access to online positions as in-person positions were widely cancelled. Our data indicate, however, that while OINPs did play an important role in the internship ecosystem and served the needs of many students, there were more students registering with these platforms than there were positions available for them. For students who registered with the OINPs in our study, the number of students who actually took a position was rather low, with less than ½ interviewees (8% for OINP-A, 42% for OINP-B) and 65.6% (n=120) students participating in OINP-B programs. It is important to note, however, that students who pursued an internship via the OINP-B website, these positions were largely positive and productive experiences for students.

These findings raise questions about the scope and role of OINPs in the broader landscape of internships, and how they fit within the broader suite of online positions available to college students, while also pointing to the need to increase the number of remote positions available to students seeking internships.

Finding #3: Online interns in our sample tended to be continuing-generation, have higher GPAs, come from upper-income families, and were non-STEM majors

Our data indicate that the demographics of students pursuing online internships varied significantly along key demographic variables such as first-generation status, grade point average, family income, major, race and gender. While these results need to be cautiously interpreted given the non-random and non-representative nature of our study sample, the data do indicate that online interns represent a relatively narrow slice of the student population. In particular, for those engaged in supporting STEM education such as the National Science Foundation, these data highlight the fact that online internships are currently not a feasible option for STEM students. This situation may be due to the hands-on nature of work in these disciplines and/or the predominance of Business and non-STEM employers offering remote positions.

Finding #4: Online internships do not appear to solve the access and equity problem

For some observers the online internship has the potential to solve the access and equity problem in the internship world, where unpaid positions have excluded low-income or working students, too many positions are available only through social networks, and geographically isolated students have been unable to access positions located in large urban areas. However, our data suggest that online interns are predominantly from upper- and middle-income backgrounds (75.8%, n=634) and that there are more unpaid online than in-person internships (42% versus 34.9% unpaid).

Our data also indicate that informal and inter-personal resources are the most common source of information about internships, that most (but not all) students recall anti-discrimination policies as part
of their internship posting, and that a small number (2%, n=20) experienced discriminatory behaviors first-hand in their online internship. However, the fact that 3% (n=64) of students overall reported discriminatory behaviors and that about 40.8% (n=405) of online interns did not recall anti-discriminatory policies from their organizations indicates room for improvement.

Finding #5: Online interns report lower satisfaction, developmental value, 21st century skills, professional network development, and high-skill tasks than in-person interns

As part of the quality indicators of the Internship Scorecard, we highlight key factors that the literature indicates are important components of an effective internship as well as outcomes that are often discussed as benefits of the internship experience. Unfortunately, our data indicate that online interns have significantly lower level of satisfaction with their experience, lower scores for both academic and developmental value, lower level of acquiring new 21st century skills, and less growth of professional networks than students pursuing in-person internships. Furthermore, the data indicate that fewer online interns report being engaged in high-skill supervised work than in-person interns (31.9% to 40%), which is one of the core ideas of experiential learning, especially for experiences like internships and apprenticeships that are intended to introduce novices to the professional world. These results are troubling and indicate that the benefits of an in-person internship do not easily or uniformly translate to an online experience.
Finding #6: Future online internships must pay especially close attention to task design, supervision, and communication

Based on data from both our surveys and interviews with students, it is clear that while all internship providers (and their academic advisor counterparts) need to pay close attention to the quality of task design, supervision and communication, these issues are especially lacking in some online internships. Consequently, as the field continues to advocate for students to take online or virtual internships, these issues must be addressed and internships improved along these dimensions. Since these elements are also issues with remote work more generally, especially the problems of social isolation and ineffective supervision and communication, if an online internship is to provide students with remote working skills which one student called “the future of work,” then employers and academic advisors will need to improve how online experiences model and cultivate these skills.

Finding #7: Support services and training will need to be provided to many employers (and academic advisors) regarding how to design and implement an effective online internship

One of the primary conclusions we can draw from the data collected for this study is that while online internships are likely a permanent part of the ecosystem of experiential learning for college students, and a potential answer to some vexing issues related to equitable access, they remain a work in progress. To improve these complex forms of remote and/or digital learning and professional socialization, employers and academic advisors will need training and support services to develop high-quality programs. While not all organizations will be able to offer positions like those featured by TreeHouse Foods, the goal for all online internships should be to offer experiences that comply with the NACE standards, the principles of the Internship Scorecard, and key elements of effective remote work and digital learning.

Our study indicates that the field has a long way to go, and also that these debates and discussions about work-based learning cannot ignore the fact that many college students were struggling with financial, mental health, and academic challenges even before the COVID-19 pandemic. Consequently, in a post-pandemic world attention should be paid to not only improving internships at the employer and advisor levels, but also in providing support services so that students have the tools and resources to thrive and persist in higher education.
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Center for Research on College to Workforce Transitions (CCWT)
1025 West Johnson Street, Madison, WI 53706
For more information please contact the Center at: ccwt@wcer.wisc.edu
cwccert.wceruw.org