# Results from the 1-year longitudinal follow-up analysis for the College Internship Study at Texas College

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The College Internship Study

# Texas College 1-year follow-up: Executive Summary

This report includes findings from the second round of data collection (Fall 2020 or T2) at Texas College for The *College Internship Study*. The data collected at T2 include follow-up interviews with 6 students and a follow-up online survey of 110 students who participated in the first round of data collection (Fall 2019 or T1). These data are analyzed to provide faculty, staff, and leadership at Texas College with evidence-based insights about the impacts of internship participation on students' lives and careers. This second round of the *College Internship Study* at Texas College is guided by the following research question: **What are the changes concerning students' internship experiences and outcomes comparing longitudinal data at two points in time?**

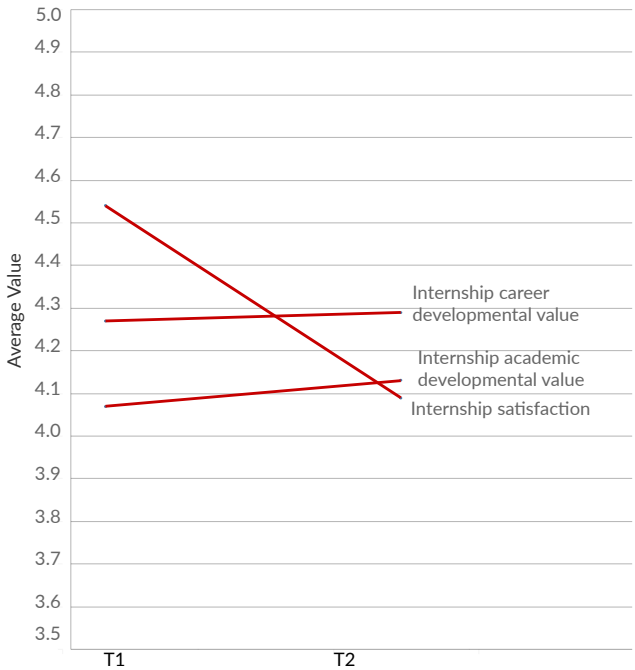
## KEY FINDING 1

**Nearly thirty percent of respondents participated in an internship at either T1 or T2.** This table shows that 78 (70.9%) respondents did not participate in an internship at either time.

| Internship Group | Total (%) |
|---|---|
| Neither T1 nor T2 | 78 (70.9%) |
| T1 but not T2 | 13 (11.8%) |
| T2 but not T1 | 8 (7.3%) |
| Both T1 & T2 | 11 (10.0%) |

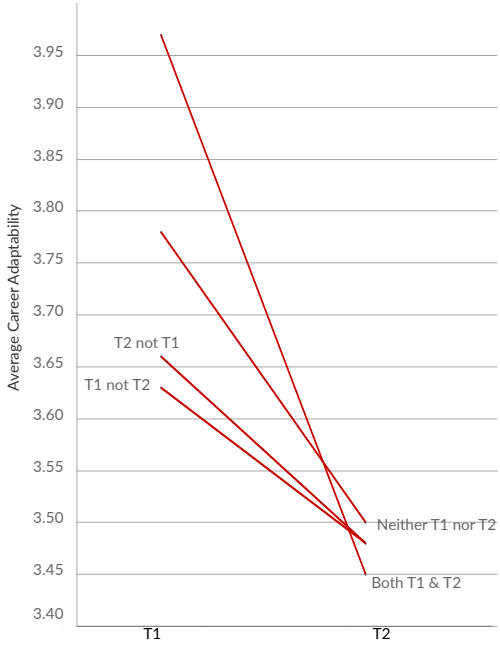
## KEY FINDING 2

**For students who participated in internships at both Time 1 and Time 2, internship satisfaction declined considerably in Time 2.** Despite this, perceived internship value, both in terms of academic and career value, remained steady and even slightly increased in Time 2. This figure shows the changes in average scores for each measure of internship experience between T1 and T2.



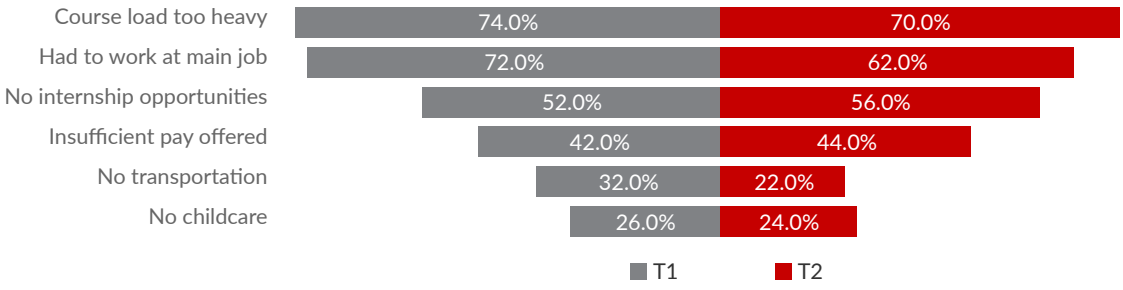
## KEY FINDING 3

**Students' reported ability to adapt to career changes decreased considerably between T1 and T2.** This figure shows the change between T1 and T2 broken down by when students participated in internships. Across all internship participation groups career adaptability decreased, though the most dramatic decrease was among students who had an internship at both times.




## KEY FINDING 4

Sixty-six students indicated they had not participated in an internship in T1, despite wanting to do so. A year later, 50 of these 66 did not participate despite still being interested. **Consistent across both times, students reported that a heavy course load and having to work at their current job were obstacles to internship participation.**

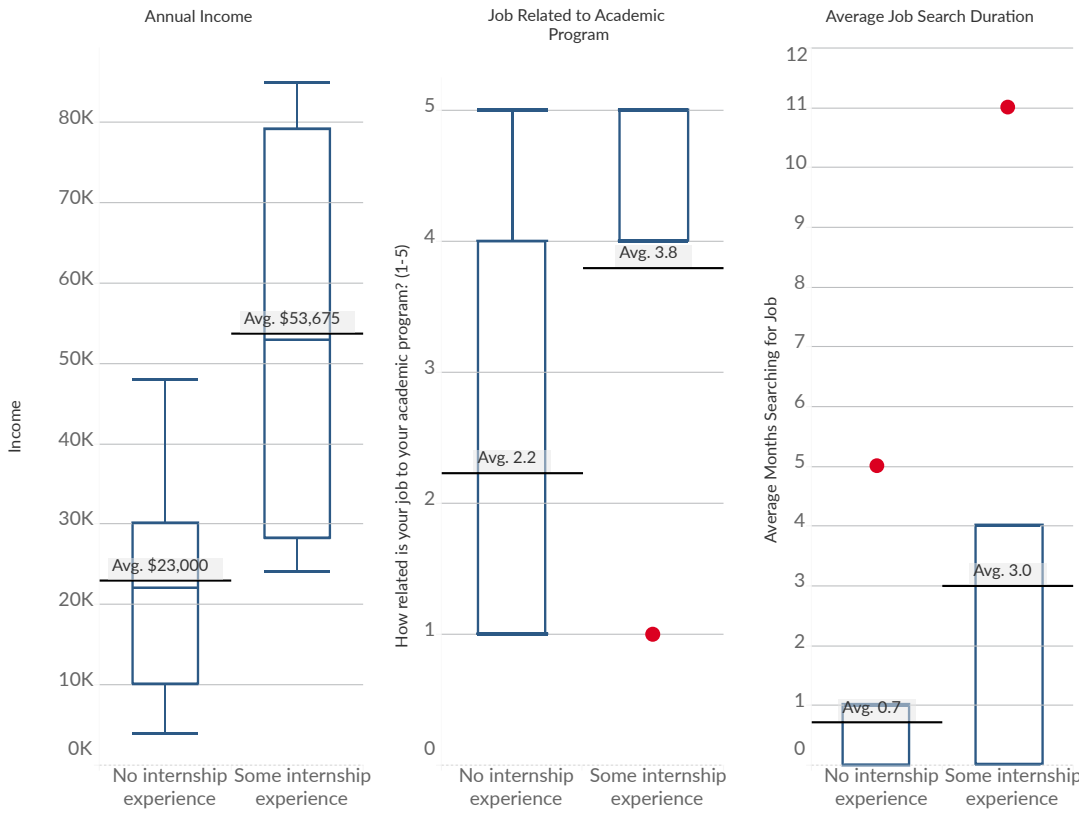



## KEY FINDING 5

Among the 25 graduates at Texas college, 7 had not found a job at the time of the survey. Their reported reasons for this were: 1) No jobs available; 2) Their credentials made them overqualified for entry-level; 3) The COVID-19 pandemic has made job opportunities scarce

## KEY FINDING 6

**Employed graduates with some internship experience reported higher incomes, longer job searches, and that their jobs were more related to their academic program compared to their peers.** These three figures show the distribution based on internship participation, with the box plot showing the range of values and the averages highlighted. Given the small sample size, these results should be interpreted with caution.




## KEY FINDING 7

In interviews with students who had an internship experience, several key outcomes emerged. Internships helped students to:

- Explore their career field
- Increase self-confidence and motivation
- Learn new skills and gain career knowledge

## Contents

# I. INTRODUCTION

In higher education, internships are widely considered beneficial co-curricular opportunities that help undergraduate students acquire real-world professional experience and become better prepared for their transition to the workforce. Increasingly, however, the promise of internships is subjected to empirical scrutiny as some evidence suggests that internship programs are not available to all students on account of socioeconomic and other barriers (Hora, et al., 2019), and that participating in an internship does not always yield the expected positive results (Klein & Weiss, 2011; Silva et al, 2018).

The literature on internship outcomes has largely focused on students' ability to secure a job and avoid unemployment (Baert et al., 2019; Nunley et al., 2016; Rigsby et al., 2013). Thus far, the evidence regarding labor market outcomes of internship participation continues to be mixed. Individuals' background and internship specific contexts seem to matter substantially in terms of the extent to which internships can benefit students in their job search (Klein & Weiss, 2011). Some argue that internships benefit students by affording them necessary connections rather than contributing to their practical learning (Weiss et al., 2014). Such arguments challenge the notion that internships are always a rich, experiential learning opportunity. Additionally, a myriad of studies has focused on other outcomes of internship participation, including influencing students' career decisions (Powers et al., 2018), students' work ethic and preconceptions about the professional world (Taylor, 1988), students' perceptions of employment traits (Green et al., 2011), among other studies that document positive outcomes for students (Hora et al., 2017; Gillespie et al., 2020).

Generally, most studies on employment or psychosocial impacts of internship participation are cross-sectional, with few studies that document the longitudinal impact of internships for students (Negru-Subtirica et al., 2015; Ocampo et al., 2020; Silva et al, 2018). One interesting exception is Ocampo and colleagues' recent study (2020) on the longitudinal impact of internship participation on students' level of career adaptability. Career adaptability is an important psychosocial competency, which refers to "the readiness to cope with the predictable tasks of preparing for and participating in the work role and with the unpredictable adjustments prompted by changes in work and working conditions" (Savickas, 1997, p. 254). It is measured in relation to four psychological traits that interns display at work: levels of concern, control, curiosity, and confidence (Porfeli & Savickas, 2012). Ocampo et al. (2020) conducted a survey of 173 undergraduate hotel and restaurant management students in China, measuring the career adaptability of interns and non-interns at five points in time before, during, and up to five months after the completion of their internships. They found that for the students who interned, all measures of career adaptability increased linearly overtime; whereas for the students who did not intern, there was no growth in the career adaptability except for the dimension of career concern. The findings indicate that internship participation may provide students the opportunity to acquire increased psychological skills and resources to manage career planning and adjustment, and that such a benefit may persist over time.

The College Internship Study is a mixed-methods, longitudinal research project that aims to document the characteristics of undergraduate students' internship experiences, investigate how internship participation is related to certain student characteristics, and analyze how participating in an internship affects the career trajectories of students. The first round of research conducted at Texas College resulted in a report with information regarding the internship participation rates, characteristics, and outcomes for students, as well

as findings about barriers that students face when attempting to access internships. The T1 results indicated that internship participation was associated with positive outcome measures of students' career adaptability, internship satisfaction, and perceived developmental value (Chen et al., 2020). In the fall of 2020, CCWT conducted a second round of data collection at Texas College as part of the College Internship Study.

The survey results from this second round of research for the *College Internship Study* allow us to study if there are any systematic patterns over time in internship experiences and outcomes for students with or without internship experience before graduation. Specifically, we were able to compare internship experiences between Time 1 and Time 2 (e.g., supervisor support, supervisor mentoring, goal clarity, etc.), and describe changes in attitudes and perceived benefits for students who reported internship experiences at both times. Furthermore, this second round of data allows us to compare how different students fared in the labor market post-graduation. The current report provides descriptive results regarding the job search process for students who did and did not participate in internships as undergraduates, including the graduates' job search strategies, the duration of time spent finding a job, and the pay they receive upon being hired. Additionally, we analyzed students' career adaptability across T1 and T2. Table 1 summarizes the different samples and the outcomes that are presented in this report. .

**Table 1. Description of longitudinal sample and outcome measures**

| Description of sample | Sample size | Outcomes measured | Reported |
|---|---|---|---|
| Students who did not participate in an internship at either T1 or T2 | n = 78 | Barriers to internship participation | Results section III |
| Students who participated in separate internships at T1 and at T2 | n = 11 | Internship program features | Results section IV |
| Graduates with employment outcomes measured at T2 | n = 18 | Job market performance | Results section V |
| All participating students with longitudinal psychosocial outcomes measured at T2 | n = 110 | Career adaptability | Results section V |

One-on-one phone interviews with students provided detailed narratives of students' experiences during their internships, and their perceptions of the outcomes and consequences of their internships. We place students' experiences at the heart of our analyses, and hope to inform the work of educators, employers, and career service professionals in order to aid in designing better, more meaningful, and effective internship programs for students.

## II. SAMPLE AND INTERNSHIP PARTICIPATION

The second round of data collection took place in fall 2020 (time 2 or T2), a year after the first survey was administered to students in fall 2019 (time 1 or T1). These T2 data include an online survey of students who participated in the survey at T1 and one-on-one phone interviews with students who participated in focus groups at T1 (see Table 2). The T2 online survey was administered to 233 students and 110 of them completed the questionnaire, resulting in a response rate of 47.2%. The survey included questions about students' demographic characteristics, career adaptability, the characteristics of their internships, and post-graduation and employment questions for those who had graduated or stopped attending college. This report only showcases the results relevant for the comparison between T1 and T2 internship experiences, as well as to the longitudinal outcomes for students who were employed after graduation.

Due to covid-19 and in line with CDC guidelines, follow-up interviews were via phone. There were six students who participated in one-on-one follow-up phone interviews. Two of those students had participated in at least one internship by the time of the second round of data collection and four students indicated they had not.

**Table 2. Description of the Fall 2020 T2 sample**

| | Survey Sample | Interview Sample |
|---|---|---|
| Total | 110 | 6 |
| Gender | Male = 38 (34.5%)<br>Female = 72 (65.5%) | Male = 2 (33.3%)<br>Female = 4 (66.6%) |
| Race | Asian = 1 (0.9%)<br>Black = none<br>Hispanic = 96 (87.3%)<br>White = 11 (10.0%)<br>Other = 2 (1.8%) | Asian = 0 (0%)<br>Black = 0 (0%)<br>Hispanic = 6 (0%)<br>White = 0 (88.9%)<br>Other = 0 (11.1%) |
| First-generation college student | Yes = 59 (53.6%)<br>No = 51 (46.4%) | Yes = 3 (50%)<br>No = 3 (50%) |

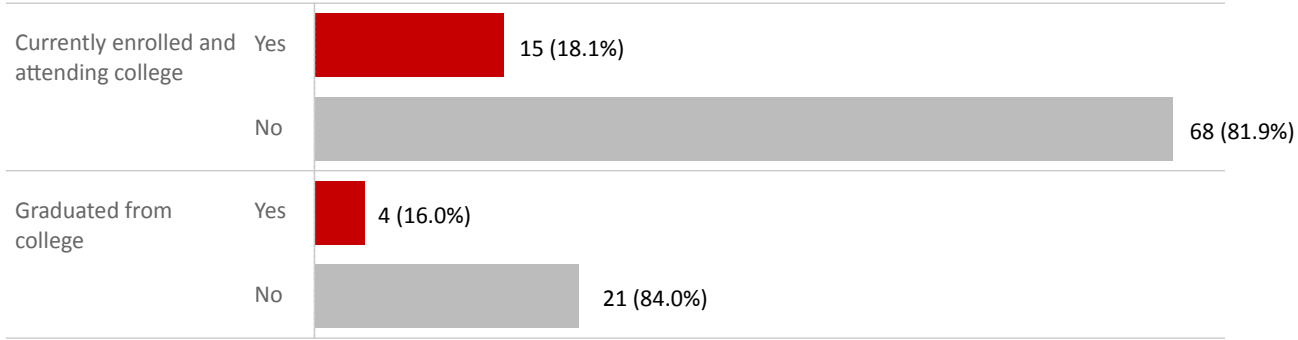
Thirty-two of the 110 survey respondents (29.1%) reported having participated in an internship program. We found that 8 students (7.3%) reported having an internship experience at T2 but not at T1, while 13 students (11.8%) reported having participated in internship(s) at T1 but not T2. In addition, a total of 11 students (10%) reported having done separate internships at both instances of data collection. In contrast, 78 students (70.9%) reported not having done an internship at either time (see Figure 1). Their barriers to internship participation will be explored and discussed in the next section.

**Figure 1. Internship participation across T1 and T2** (n=110)


Twenty-five students (22.7%) had graduated by the second round of data collection, and 83 students (75.5%) were still enrolled in college. At the time of data collection, two students (1.8%) reported they were taking a break from college but planned to return within two years.

The data collected shows that only 16% (n = 4) of students who already graduated took part in internship programs, and about 18% (n = 15) of those still enrolled had taken part of an internship in the 12 months before the survey was conducted (see figure 2).

**Figure 2. Internship in the Past 12 Months (Yes/No), by Graduation Status** (n = 108)




Note: Two students who reported taking a break from college with plans to re-enroll within the next two years were not included in the Figure 2.

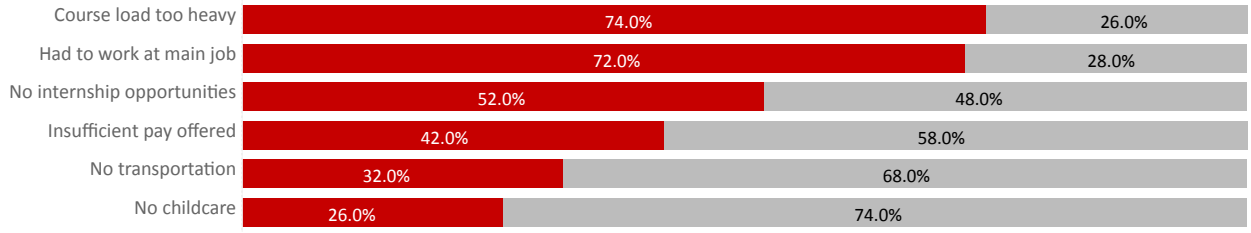
## III. RESULTS: BARRIERS TO INTERNSHIP PARTICIPATION ACROSS T1 AND T2

In this section, we present findings regarding the 78 respondents who reported not having participated in an internship at T1 or T2, focusing specifically on those who were interested in doing an internship but were unable to do so for different reasons.

First, considering each instance of data collection separately, of the 86 students who did not participate in an internship in T1, 66 of them (76.7%) reported that they were interested but unable to do so. At T2, of the 91 students who did not do an internship, 71 students (78%) reported being interested in doing one. Moreover, 50 of the 66 students who were interested in doing an internship at T1 (75.8%) reported still not being able to do an internship in T2, despite being interested in doing so. This suggests that some barriers to internship

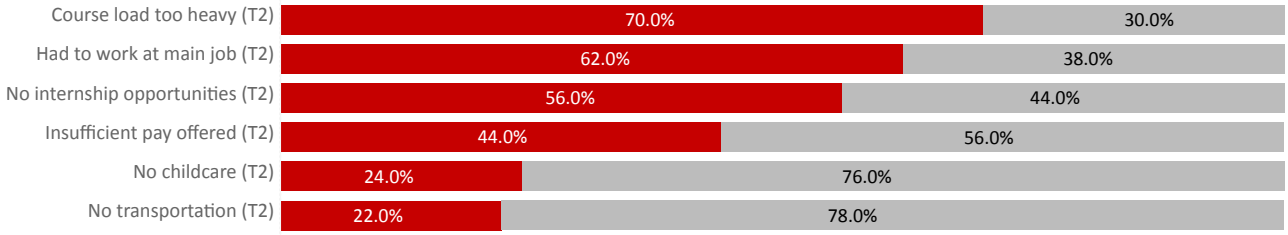
participation may persist over time. Figures 3 & 4 show the breakdown of reported barriers to internship participation at T1 and T2 for these respondents.

**Figure 3. Barriers to internships at T1 for students who did not participate at either time.** (n = 50)




Note: Students can choose multiple barriers.

**Figure 4. Barriers to internships at T2 for students who did not participate at either time.** (n = 50)




Note: Students can choose multiple barriers.

For the most part, the same barriers persisted across T1 and T2, with having a heavy course load and needing to work at their current job being the primary factors contributing to students' lack of participation. Lack of transportation and lack of childcare remained consistently low in frequency across both time points.

## IV. RESULTS: STUDENTS' INTERNSHIP EXPERIENCE ACROSS T1 AND T2

This section focuses on students who reported separate internships at T1 and T2. We compared internship characteristics and selected survey measurement scores that characterize multiple internships and students' experiences. We furthermore analyzed the interview data to better understand the reasons why students took multiple internships.

Two of the students that we interviewed in this second round of the study completed an internship during and after college. They saw this as an essential part of their resume building and a path towards their career. One electrical engineering student, for example, is working in laboratories, specifically working with silicon, which is the main material used to make integrated circuits. He said that these opportunities are often shared to him via his faculty or people at the university and allows him to have real world experiences. He also shared that his department requires students like himself to have internships. For others, a biochemistry major student shared that he obtained an internship at an elite university for the summer, but due to the pandemic, it was moved

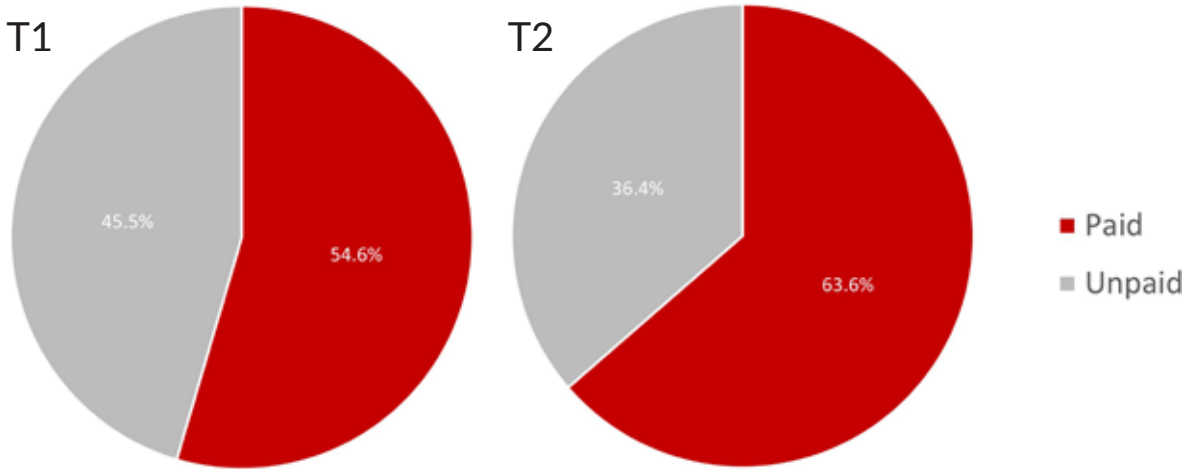
to online. What stood out for him about his internship was living in the campus and being more independent. Having to figure out how to manage his time was something he had not done before and so this kind of exposure helped him manage his time effectively. He was also able to foster and maintain relationships with people at the internship site. In his case, he bridged the two internships by expanding his skills from one lab to the next.

Table 3 presents a summary of various dimensions of internship program features that reflect students' internship experiences. Internship duration is measured in weeks, and all other questions consist of scores that were measured using a five-point Likert scale.

In general, the 11 students who took separate internships at T1 and T2 had longer internships at T2. On average, internships at T2 lasted for 23.4 weeks (less than six months), while reported internships at T1 lasted, on average, 14.5 weeks (less than four months). This difference, however, is not statistically significant using commonly used thresholds of significance.

Of these 11 students, more than half did paid internship at T1 (6 students or 54.6%). Only five of them (45.4%) were not able to secure paid internships in the first instance of data collection. A year later, at T2, seven students did paid internships (63.6%). The other four students (36.4%) did unpaid internships at T2.

**Figure 5. Internship paid vs unpaid for students who did internships at both T1 and T2** (n = 11)




The median hourly pay for the six students who did paid internships at T1 was $8. The group as a whole contains unusually "high pay" individuals, as two of the respondents reported hourly compensations of $30 and $41 per hour. All others reported values below $11 per hour. The median hourly pay for the seven individuals who did paid internships at T2 was $14.95. The number of individuals reporting pay for their intern work is too small to assess whether this difference is statistically significant.

As mentioned above, other internship dimensions were measured using a five-point Likert scale. The mean internship satisfaction score at T1 (4.5) for the students was barely higher than that for the same students at T2 (4.1), and this difference is not statistically significant based on commonly used thresholds of statistical

significance. The mean scores of the developmental value that respondents perceived in their internships were slightly higher in T1 than in T2, but these differences, in the composite and in the academic or career subscales, were not statistically significant.

**Table 3. Internship experience measurements**[1] (n = 11)

| Internship Program Features | T1 | | T2 | |
|---|---|---|---|---|
| | Mean | SD | Mean | SD |
| Internship duration (in weeks) | 14.5 | 7.6 | 23.4 | 20.2 |
| Internship satisfaction | 4.54 | 0.52 | 4.09 | 1.14 |
| Internship developmental value (composite) | 4.17 | 0.69 | 4.21 | 0.53 |
| *Internship academic developmental value* | 4.07 | 0.71 | 4.13 | 0.74 |
| *Internship career developmental value* | 4.27 | 0.73 | 4.29 | 0.42 |

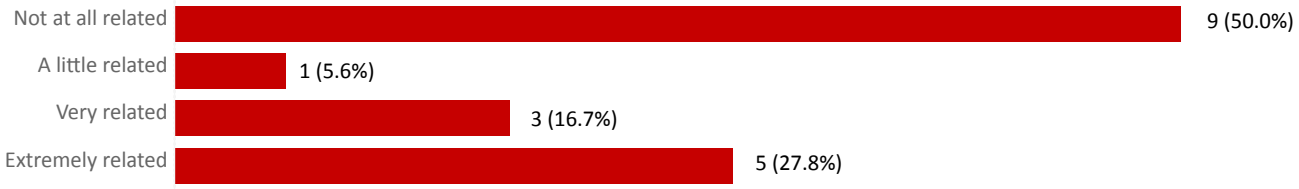
## V. RESULTS: STUDENT OUTCOMES A YEAR LATER: JOB MARKET PERFORMANCE AND PSYCHOSOCIAL OUTCOMES

By the second wave of data collection, 25 of the 110 respondents had graduated from Texas College. Among these 25 students, 18 (72%) had found jobs. The remaining seven students attributed their unemployment to a general lack of opportunities (because there were no jobs available, because their credentials made them overqualified, etc.) and, importantly, because they were graduates who entered the labor market in the middle of the COVID-19 pandemic, and job opportunities may have been scarce.

### Survey results: Employment, job search, and earnings at T2

The 18 employed graduates, on average, found a job within 1.4 months. As shown in Figure 6, 44.4% of them (n = 8) found their jobs "very" or "extremely" related to their majors in college. However, an even larger share of students, 55.6% (n = 10), reported that their current jobs were "not at all" or "a little" related to their majors.

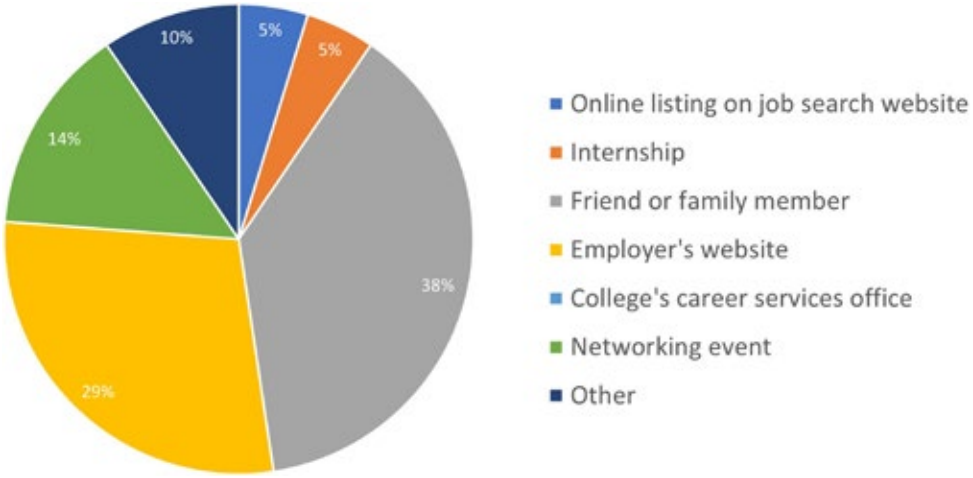
**Figure 6. How much is your current position related to the field you studied in college?** (n = 18)




1 The internship **satisfaction** question measures how satisfied students were with their internship experience. Finally, internship **developmental value** questions assess students' perception of how well the internship experience contributed to their own career development. Please refer to Time 1 technical report for detailed information of the questions for each measurement (Chen et al., 2020).

Figure 7 shows the students' job search methods. It illustrates that networks of family and friends, visits to employers' websites and networking events were the three major approaches to finding jobs.

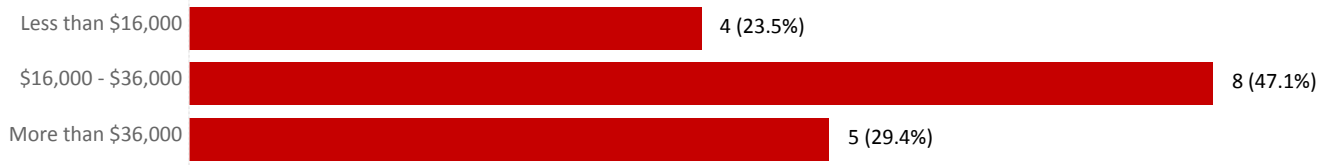
**Figure 7. How did you find out about your current job?** (n = 18)




Among the 18 employed graduates, five had internships before graduation (either at T1, T2 or both). Only three of the employed students answered the question about whether their internships lead to their current job, and all three of them indicated that they "probably" did.

Seventeen students who had graduated and found jobs reported their annual income. The average income of these students was $30,218 with a standard deviation of $22,671; the median[2] was $25,000. Figure 8 shows the distribution of their annual income.

**Figure 8. What is your estimated annual income (before taxes or other deductions)?** (n = 17)




2 Median is a value that separates the higher half from the lower half of a data sample.

## Survey results: Job market performance by groups

Thirteen of the 18 employed students did not take any internship during college, two reported internship participation in T1 but not T2, two reported internship participation in T2 but not T1, and only one reported participation in an internship at both T1 and T2. The job market performance of these 4 groups of students is compared below.

We compared the average job search time in months among those 18 who were employed at the time of the survey between internship groups. Employed graduates with no internship experience reported that it took them, on average, 0.7 months to find a job. Graduates with internship experience (either at T1, T2 or both), on the other hand, reported that it took them, on average, 3 months to find a job. This comparison, however, should be interpreted with caution because of the small sample size. As noted above, there are only five students in our sample who indicated being employed at the time of data collection, and did at least one internship during college. At any rate, this apparent difference in favor of those without internship experience does not pass the test of statistical significance according to commonly used thresholds.

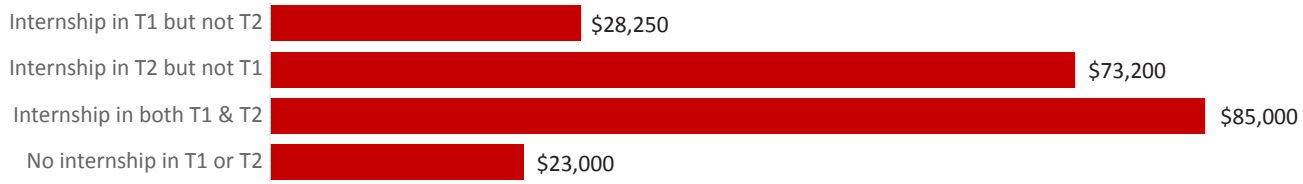
Students who had internship experiences (either at T1, T2 or both) reported that their jobs were more related to their fields of study, compared to graduates who did not take any internships in college (see figure 9).[3] The difference between these groups, however, is not statistically significant. Again here, this comparison should be interpreted with caution because of the small sample size. As noted above, there are only five students in our sample who indicated being employed at the time of data collection, and did at least one internship during college.

**Figure 9. How much is your current position related to the field you studied in college, on scale 1-5, by internship participation?** (n = 18)


Among the 17 students who reported their income, those who took internships reported the highest average annual incomes: $28,250 for those who did internships at T1 only, $73,200 for the one respondent with reported income who did an internship at T2 only, and $85,000 for the one respondent who reported income and indicated doing an internship at both T1 and T2. Those without any internship experience reported the lowest annual income at $23,000. On average, students who did internships in college reported higher annual incomes than students with no internship experience, and with such high incomes for the internship participants, this difference turns out to be statistically significant ($p$ = .006, $t$ = -2.84, $df$ = 15). However, once again, we underscore that these comparisons should be taken with caution, because of the small sample size.

3 The relatedness between current job and college major was measured by one single question asking "how much is your current position related to the filed you studied in college?" using a five-point Likert scale from 1=Not at all related; 2=A little related; 3=Somewhat related; 4=Very related; 5=Extremely related

**Figure 10. What is your estimated annual income (before taxes or other deductions), by internship participation?** (n = 17)




We also investigated the relationship between internship participation and post-graduation employment status for all 25 students who had graduated from Texas College. No obvious relationship emerges between students' internship participation and post-graduation employment since the sample of internship participants is quite small and most student graduates reported to be employed at the time of the survey (18 out of 25).

In sum, nearly three of every four graduated students were employed at the time of data collection (18 out of 25, or 72%). About 44% of them indicated that their current jobs were very or extremely related to their college majors. All three students who answered the question about whether their internship led to their current employment indicated that it probably did. Notably, job searching through networking through family and friends, visiting directly the employer's website and attending networking events were the main approaches for graduates to find a job. Lastly, graduates who had taken internships appeared to have jobs that were more related to their college majors and also reported higher annual incomes, but the differences between them and those with no internship experience should be taken with caution due to the small size of the sample of students with a college internship experience.

Though these findings need to be further examined with a larger sample size, they imply the significance of internships in students' post-graduation labor market performance, especially regarding job search, job earnings, and their employments' relatedness with their field of study. However, the underlying mechanisms of the role of internships in individuals' job search processes need to be further investigated. We plan to continue exploring the longitudinal effects of internship participation on students' employment outcomes based on the above-mentioned findings, using data that aggregates the survey results from all sites participating in the *College Internship Study*. The results of the follow-up interviews highlight some of the specific ways that students perceive their internships to benefit their academic and career development.

## Survey results: Career adaptability development

This analysis uses career adaptability as an important psychosocial competency. It was measured using the 24-item Career Adapt-Abilities Scale (CAAS, Savickas & Porfelli, 2012), consisting of 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 these subscales are measured by six questions that elicit how strongly the respondent rates themselves on these attributes on a five-point Likert scale (1 = not strong, 2 = somewhat strong, 3 = strong, 4 = very strong, 5 = strongest).

Table 4 shows the T1 and T2 mean scores and standard deviations for each sub-scale and the composite score for all the students in the sample. In general, all the career adaptability scores decrease in T2 compared to T1, and all these differences are statistically significant. The composite score at T2 for the respondents in the sample was 3.49, nearly 0.3 points lower than that at T1. This difference is significant according to commonly used thresholds of statistical significance ($p < .001$, $t = 4.95$, $df = 109$). The pattern is the same when considering the concern subscale ($p < .001$, $t = 6.02$, $df = 109$), the control subscale ($p = .005$, $t = 2.64$, $df = 109$), the curiosity subscale ($p = .002$, $t = 2.94$, $df = 109$), or the confidence subscale ($p < .001$, $t = 3.59$, $df = 109$).

We then assessed individuals' career adaptability development over time for different internship participation groups. It is important to note that the sample sizes of all groups are relatively small, requiring qualifications to the results. Despite these restrictions, we found that the statistically significant difference between T1 and T2 career adaptability scores is driven largely by the 78 students who did not participate in an internship program during college ($p < .001$, $t = 4.29$, $df = 77$). Differences in all other internship participation groups were statistically significant.

**Table 4. Career Adaptability Results across T1 and T2.** (n=110)

| Career Adaptability Composite and Sub-Scales | T1 | | T2 | |
|---|---|---|---|---|
| | Mean | SD | Mean | SD |
| Career Adaptability Composite | 3.78 | 0.66 | 3.49 | 0.72 |
| Sub-Scale: Concern | 3.98 | 0.70 | 3.48 | 0.81 |
| Sub-Scale: Control | 3.76 | 0.77 | 3.57 | 0.79 |
| Sub-Scale: Curiosity | 3.59 | 0.84 | 3.38 | 0.88 |
| Sub-Scale: Confidence | 3.77 | 0.80 | 3.51 | 0.89 |
| **Career Adaptability Composite Score by Internship Participation** | **T1** | | **T2** | |
| | **Mean** | **SD** | **Mean** | **SD** |
| Internship at both T1 & T2 (n=11) | 3.97 | 0.62 | 3.45 | 0.72 |
| Internship at T2, not at T1 (n=8) | 3.66 | 0.94 | 3.48 | 0.52 |
| Internship at T1, not at T2 (n=13) | 3.63 | 0.64 | 3.48 | 0.61 |
| No Internship at T1 or T2 (n=78) | 3.78 | 0.65 | 3.50 | 0.77 |

## Interview results: Student internship outcomes

From the thirteen students who participated in the initial interview (Time 1) at Texas College, six students participated in the follow-up study (Time 2). Among the six participants, four participants self-identified as females, and two as male. All participants during Time 2 self-identified as Hispanic and ranged between different majors, such as: accounting, forensic biology, electrical engineering, cellular and molecular biochemistry, and psychology. Additionally, about half of the students had graduated from Texas College and were either seeking employment, had employment, or were applying or enrolled in graduate school.

Students shared a wide range of experiences, reflections, and benefits after participating in an internship experience. Below we described the most common themes or outcomes of internship experiences, which include: learning and skill development, exploration of the field, and an increased self-confidence or motivation from participating in an internship (Table 5).

**Table 5: Perceived Outcomes of Internship Participation at Texas College** (n = 6)*

| Outcomes | Examples |
|---|---|
| Learning and skill development | The ability to learn from others and/or learn something new, including learning about one's self |
| Exploration of the field | Gaining an understanding of the profession and/or workplaces setting or culture |
| Increased self-confidence or motivation | An increased confidence in one's own abilities or motivation to succeed in academics and/or careers |

*This sample includes the six follow-up interviews with students who had participated in an internship from the Texas College; the characteristics of internship experience include those that were discussed most frequently, in descending order of frequency.

The greatest benefit students described when participating in an internship was the learning and skill development they received through their experience. Some students shared how being independent at their respective internships created a healthy challenge and help them learn a new skill. For example, a student shared how living on the campus and away from home makes you be "more independent, [you] start to realize what you need to do in your internship and your social life. So it gives you that liberty to manage your time, and I think it's important. I appreciated that because it gives you an idea of how to live by yourself." While these experiences were not particularly related to the internship itself, learning to be on your own became a part of the meaning that the student associated with internships.

Additionally, students also reflected on how participating in an internship allowed them to learn something new. In an interview with a psychology major student, she shared how an internship can not only help one with learning new skills, but one can also learn about others. She explained,

> *"I think it's [internship] an enrichment experience because you get to know more people. You work on your skills. Also, I think you grow as a person, you know. It's not only professional skills but also, like you learn how to treat other people."*

Other students described how the internship experience provided them with specific tasks and how these tasks contributed to their own learning. One student said, "I'm going to be working in laboratories, specifically working with silicon, which is the main material used to make integrated circuits…" which is a process he anticipated he would need to know how to do once in the workforce.

A second outcome that students highlighted was the exploration of the field. The following quote highlights a student's daily virtual research lab experience at MIT. During the summer he conducted multiple experiments with different bacteria pathogens. He indicated how the global pandemic caused a shift in his internship to an online platform. Here he provides a description of a "typical day in the field":

> *"Every day we had a meeting at 10 a.m. Everything was Eastern Time, [so I] had to do two hours before. They knew many people were in the West side so they tried not to be super early in the meetings because of that. So, we had that meeting with our program director almost every day. Depending on the day, we are either presenting, a faculty professor, or something. They gave us a short schedule of every hour in the day that we had to be there and what is optional, because we also took like a class, so it had a specific day for that class as well. But for my lab it was more the time with my mentor. But, yes, the lab work, it was crazy. I saw my mentor like three times a day because we had to finish the project."*

The student felt that experiencing this daily rhythm of work helped to understand what it would be like to enter the profession. Another student also shared that professors emphasized "the pros are getting to network more and expanding like my knowledge in research" and advocated "to enroll in many internships as we can" in order to obtain practical knowledge of the field.

The third most common outcome was an increased sense of confidence among students. One student shared that internships "[places] you outside your comfort zone because I think you learn a lot. I say that because I moved across the country, that was very scary. You know, there's comfort in, it's only going to be a short amount of time." Additionally, a student who expressed being a graduate student during Time 2 shared his commitment and motivation towards his particular field – in particular how it is now part of the graduate school journey. He said,

> *"I loved my internship. Because of COVID I am only permitted to go twice per week, which is Mondays and sometimes Wednesdays, during a fixed time, which is from, 9 a.m. to 4 p.m. That means sometimes I need more time to work. Right now, I am registered as a graduate student. I am PhD student, first semester."*

The student expressed feeling comfortable with this transition and how it helped him feel like he could complete his doctoral degree. These examples illustrate how, over time, students learned from others, learned something new, shared similar real-world experience, and expressed feeling an increase of self-confidence to pursue career and academic goals. Additionally, students highlighted the need to move away from where they lived because they felt greater opportunities beyond the city limits.

## Interview results: Student experiences with COVID-19

We sought to understand how the COVID-19 pandemic had impacted students at Texas College. We were particularly interested in exploring how the onset of COVID-19 influenced students' academic trajectories, career development, and internship experiences. For some students, college experiences changed, making it a different process than expected. For example, she shared:

> *"Unfortunately, COVID has affected my family. My mom is positive, and my grandma also turned out positive. I stopped living with my grandma and I'm currently living with my boyfriend. So, it impacted me in that sense. I was scared to be the one that was going to bring COVID home because I would still work. Like, my grandmother is done with work. So, I was scared of getting it from work, or else scared of getting it from my boyfriend. We honestly don't even know where my grandma got COVID from because she just goes to the grocery store and, to the Walgreens to pick up medication. And so, yeah, she could have possibly just gotten it from, like, public exposure at a grocery store, even though everyone's wearing masks. So, yeah, it's just like I have some family members that have COVID right now, so it's a little stressful."*

Other students expressed frustration and feeling sad during this global pandemic. Students shared how they lost motivation. For instance, a student said,

> *"Well since we are online now, I lack motivation to do work just because I was so used to being in the campus and like being in study groups. So, it just feels like we're doing this all alone now. I guess it does just feel a little like depressing but just like a little sad. Like we're not used to it."*

On the other hand, some students also expressed no change in their day-to-day routine. For instance, a student shared, "I just had a little bit more time for some stuff, like other things to do, or I used to do like now I don't have time, or I can't do them because of the pandemic." While the adjustment ranged from student to student, students shared information about on-campus services and support resources used to cope during these challenging times.

A student said, "I'm going to counseling services. So, I think that has helped me a lot in dealing with stress with emotions during this pandemic. And keep us, you keep doing exercise at home, trying to stay close to my friends, family, but, you know, like looking or seeking for new ways to stay close, even if we can't see each other." Another student also expressed, "I do go to a therapist on campus," and expressed gratitude for having someone process these feelings."

Coping, or having self-care strategies, during the pandemic were described differently among students at Texas College. Self-care is the practice of taking action to preserve or improve one's own health. Common practices that students used to cope during the pandemic were physical exercise (i.e., running, walking at the park) and support from family members or a counselor/therapist during this unprecedented time. A couple of students coped by praying. However, others shared they did not have the support from family members, and it became extra difficult for them to cope with everything that was happening.

In conclusion, the students highlight the wide variety of experiences with the pandemic and the impacts on their education. Students were thankful for the quick responses and support from university staff and educators, and most students were able to fully transition to online learning. The interviews do however also call attention to a trend: It seems that flexibility, adjustment, and empathy is required on behalf of all administrators, supervisors, and staff when it comes to working with students. Students understand that these can be challenging times and the need for time to adjust to these changes is greatly appreciated.

# VI. CONCLUSIONS AND RECOMMENDATIONS

The first round of data collection for the *College Internship Study* at Texas College indicated that there were social and economic barriers to internship participation that some students faced. It also suggested that students with internship experience display relatively high career adaptability, as well as positive outcomes of internship participation, including internship satisfaction and perceived developmental value. Furthermore, these internship outcomes were associated with high quality supervisor support, the presence of supervisor mentoring, the clarity of work tasks, task similarity to entry-level jobs, the link between academic programs and internships, and the amount of the interns' autonomy in performing their work (Chen et al., 2020).

The findings of this one-year follow-up study indicate that barriers to internship participation persist for many students. The primary reported obstacles preventing students from doing internships were having a heavy course load in college and their need to work at their current paid job. Of those who were able to do internships at both times, the reported level of internship satisfaction was virtually similar at T1 compared to the second round of data collection.

Participating Texas College students reported lower levels of career adaptability the second time they were surveyed, across all four dimensions of the career adaptability construct. It is our intention to conduct further longitudinal analysis of students' career adaptability scores using aggregated datasets.

The first report from the College Internship Study at Texas College contained recommendations for students, educators, and employers to ensure quality internship experiences for Texas College students. The results of the T2 follow-up highlight the importance of the following recommendations:

- There remain students who want to participate in internships but who face financial and other obstacles, such as the need for paid employment. Educators and employers are encouraged to remove this barrier by finding ways to compensate interns whenever possible.
- There is evidence that doing an internship may be associated with a variety of positive outcomes, including higher annual income after graduation, closer connections between employment and fields of study in college, and lesser time searching for a job. Still, in order to make the most of their experiences, students should be coached on how to advocate for their needs with employers and to communicate their need for mentorship. Additionally, educators and employers should work to ensure that internship supervisors understand the need for and are equipped to provide supportive mentorship to their interns.
- In light of the circumstances of the current COVID-19 pandemic, students may need additional support in both finding internship opportunities and making the transition to the labor market. Internships, when conducted as meaningful professional experiences, often help with this transition, and therefore students may benefit from better guidance with both finding internship opportunities and being vocal about their professional needs as interns.

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*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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