



Results from the one-year longitudinal follow-up analysis for the College Internship Study at Great Lakes Technical College

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CENTER FOR RESEARCH ON
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The **College
Internship** Study

EXECUTIVE SUMMARY

This report includes findings from the second round of data collection (Spring 2021, T2) at Great Lakes Technical College (GLTC) for The *College Internship Study*, which is a national mixed-methods longitudinal study of internship programs conducted by the Center for Research on College-Workforce Transitions (CCWT) at the University of Wisconsin-Madison (UW-Madison). The data collected at T2 of the study include an online survey of 205 students and 18 students' follow-up interviews who participated in the first round of data collection (Spring 2020 or T1). These data are analyzed to provide faculty, staff, and leadership at GLTC with evidence-based insights about the impacts of internship participation on students' lives and careers. Thus, this second round of the *College Internship Study* at GLTC is guided by the following research question: **What are the changes concerning students' internship experiences and outcomes comparing longitudinal data at two time points?**

Some key findings from our analysis of the data include:

- Internship participation rate was 17.1% at T2. Thirteen students who took an internship at T1 had a separate internship at T2; 18 students who had an internship at T1 did not have an internship at T2; 22 students had an internship at T2 but did not do an internship at T1; and 152 students did not participate in an internship at either point. The most frequently cited reasons for participating in an internship were a requirement for graduation, students were interested in exploring career options, and participants wanted to apply their coursework to real-world situations.
- Interestingly, internship participation was slightly higher during the second round of data collection. Respondents report their internship participation retrospectively, thinking about the period of 12 months before the survey was administered. Notably, more students took internships during 2020 than during 2019, even though the COVID-19 pandemic made it difficult for college students to find and secure internship opportunities across the board.
- For students who participated in separate internships at T1 and T2, nearly all indicators of internship quality increased from T1 to T2, indicating, perhaps, that students were better able to reap the benefits from their experiences in the second time they had an internship.
- Students with internships at both T1 and T2 reported a higher average annual income compared to students with only one internship and students with no internship experience. Additionally, students with some internship experience reported that their jobs were more related to their academic field than those of college graduates with no internship experience.
- Of the 152 students who did not participate in an internship at T1 or T2, fifty-five reported that they were interested in doing an internship but were unable to do so in both time periods. Moreover, some of the barriers that students suggested were preventing them from doing an internship at T1 remained present at T2. The most commonly cited barriers were students' need to work at their current job for pay and lack of internship opportunities. The latter reason was likely a consequence of the ongoing pandemic.

- Respondents reported a *decrease in career adaptability over time*. The decrease was observed in both the overall score and in the different components of the career adaptability indicator. This finding is consistent with previous literature that suggests that, as individuals progress through different stages in life, their sense of control over different aspects of their life decrease, with the potential exception of their sense of curiosity. As the pandemic represented a period of great uncertainty, it makes sense to see these decreases in the respondents of our survey.
- Students who participated in an internship at T2 discussed several key student outcomes during follow-up interviews (n=18): gaining real world experiences, socialization into the profession, learning something new at the internship, and becoming more aware with the exploration of self. This report also highlights information students shared in the follow-up interview related to how their education, career development, and wellbeing was impacted by the pandemic.

This report concludes with recommendations for specific strategies that students, staff, and faculty at Great Lakes Technical College, and employers who supervise GLTC student-interns, can apply to increase the quality and outcomes of internship programs for college students.

Contents

EXECUTIVE SUMMARY	2
I. INTRODUCTION.....	5
II. SAMPLE AND INTERNSHIP PARTICIPATION	7
III. RESULTS: BARRIERS TO INTERNSHIP PARTICIPATION ACROSS T1 AND T2.....	9
IV. RESULTS: STUDENTS' INTERNSHIP EXPERIENCES ACROSS T1 AND T2.....	10
V. RESULTS: JOB MARKET PERFORMANCE AND PSYCHOSOCIAL OUTCOMES.....	12
Survey results: Employment, job search, and earnings at T2	12
Survey results: Job market performance by groups.....	14
Survey results: Career adaptability development.....	16
Interview results: Student internship outcomes	17
Interview results: Student experiences with COVID-19	20
VI. CONCLUSIONS AND RECOMMENDATIONS	22
References.....	24

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.

In contrast, Negru-Subtirica and colleagues (2015) studied 1151 adolescents with an average age of 16.45 years and found that all four dimensions of career adaptability that were characterized by high initial levels significantly decreased over time. They suggested that individuals who initially reported high career adaptability gradually become vulnerable and experienced a longitudinal decrease in career concern, control and confident, while career curiosity remained stable throughout the academic year. This finding suggests the somewhat counter-intuitive possibility that career preparation through internships might associate with less of a feeling

of career adaptability—that is, the more you know about the workforce the lower levels of career adaptability you may have. More research is required to measure various longitudinal outcomes of internship participation. Results presented in this second report, to some extent, provide more insight into these claims.

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 the GLTC 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 (Wolfgram et al., 2021). In the spring of 2021, CCWT conducted a second round of data collection at the Great Lakes Technical 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 internship 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=152	Barriers to internship participation	Results section III
Students who participated in separate internships at T1 and at T2	n=13	Internship program features	Results section IV
Graduates with employment outcomes measured at T2	n=38	Job market performance	Results section V
All participating students with longitudinal psychosocial outcomes measured at T2	n=205	Career adaptability	Results section V

One-on-one phone interviews with students provide detailed narratives of students’ experiences during their internship experience, and their perceptions of the outcomes and consequences of their internship. In presenting our results we place students’ experiences at the center of our analyses, and hope to further inform the work of educators, employers, and career service professionals to help design better, more meaningful, and effective internship programs for college students at Great Lakes Technical College.

II. SAMPLE AND INTERNSHIP PARTICIPATION

The second round of data collection took place in the spring of 2021 (T2), a year after the first survey was administered to students in the spring of 2020 (T1). The data collected at T2 include an online survey of students who participated in the T1 survey and one-on-one phone interviews with students who participated in focus groups at T1 (see Table 2). Specifically, the online survey was administered to the 432 students who completed the survey at T1, of which 205 responded to the T2 survey, resulting in a response rate of 47.5%. The survey included questions regarding student demographics, career adaptability, characteristics of internships, and post-graduation employment for those who had graduated or stopped attending college. In this report we only include the results that pertain to the comparisons between T1 and T2 internship experiences, as well as to the longitudinal outcomes for students who had been employed after they graduated.

Eighteen students participated in one-on-one follow-up phone interviews and all but three of those students had participated in a least one internship by the time of the second round of data collection.

Table 2. Description of the Spring 2021 T2 sample

	T2	Survey Sample	Interview Sample
Total	14,482	205	18
Gender			
	Male = 42.7%	Male = 82 (40%)	Male = 5
	Female = 57.3%	Female = 118 (57.6%)	Female = 13
	Transgender = unknown	Transgender = 2 (1%)	
Race			
	American Indian or Alaskan Native = 0.6%	American Indian or Alaskan Native = 3 (1.5%)	American Indian Alaskan Native = 0
	Asian = 6.1%	Asian = 23 (11.2%)	Asian = 2
	Black = 29.3%	Black = 45 (21.9%)	Black = 4

	T2	Survey Sample	Interview Sample
	Hispanic = 18.1%	Hispanic = 27 (13.2%)	Hispanic = 2
	Native Hawaiian/Pacific Islander = 0.1%	Native Hawaiian/Pacific Islander = 0 (0%)	Native Hawaiian/Pacific Islander = 0
	White = 36.7%	White = 102 (49.8%)	White = 8
	Other = 3.8 %	Other = 5 (2.4%)	Other = 2
First-generation college student			
	Yes = 49%	Yes = 84 (41%)	
	No = 51%	No = 121 (59%)	
Major Discipline¹			
		Arts & Humanities = 37 (18.1%) Bio. Sci., Agri, & NR = 13 (6.3%) Business = 43 (20.9%) Comm., Media, & PR = 7 (3.4%) Engineering = 8 (3.9%) Health Professions = 10 (4.9%) Phys. Sci., Math, & CS = 7 (3.4%) Social Service Prof. = 16 (7.8%)	

In terms of internship participation, 53 (25.8%) of the 205 survey respondents reported having participated in an internship program. We analyzed the data by comparing students' internship participation across T1 and T2 and found that 22 students reported internship experience at T2 but not T1, while 18 students reported having participated in internship(s) at T1 but not T2. A total of 13 students reported having participated in a separate internship in both instances of data collection. In contrast, 152 students (74.2%) reported not having participated in an internship at either time (see Figure 1). Their barriers to internship participation will be explored and discussed in the next section.

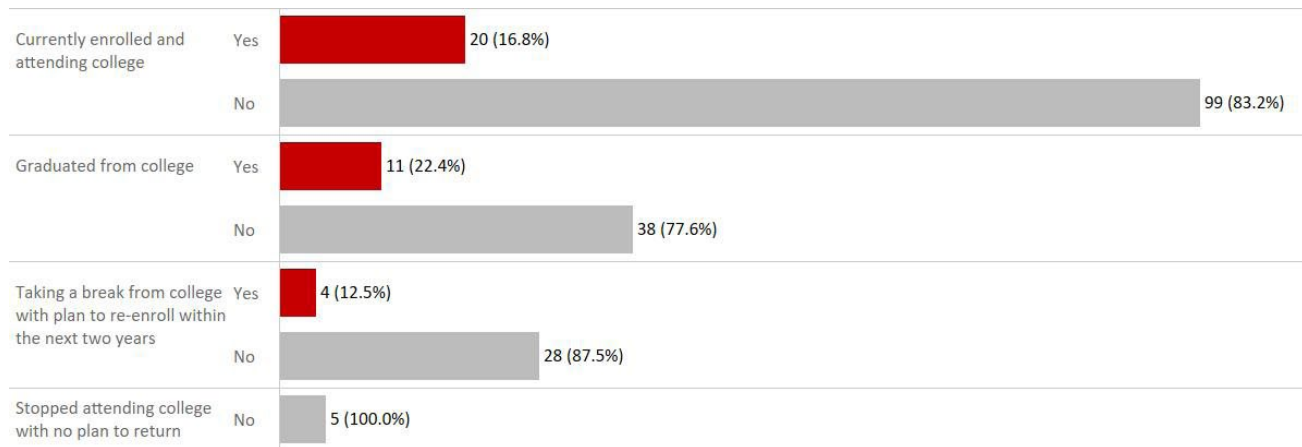
¹ Based on T2 major; Majors recoded using NSSE classifications

Figure 1. Internship participation across T1 and T2 (n=205)



Regarding graduation status, 49 (23.9%) students had graduated by the second wave of data collection, and 119 (58.1%) students were still enrolled in college. In terms of internship participation, 22.5% (n=11) of students who already graduated took part in internship programs, while 16.8% (n=20) of those still enrolled participated in an internship (see Figure 2).

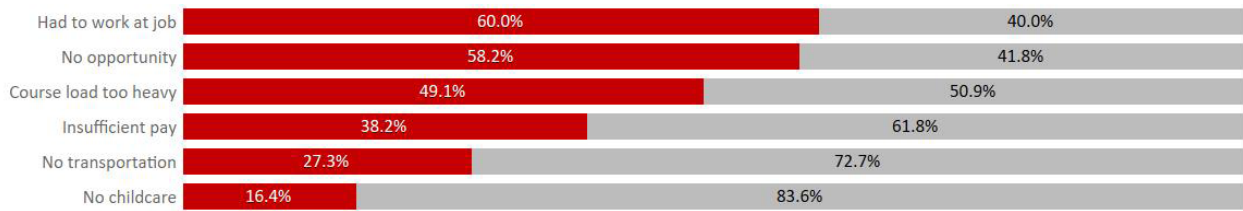
Figure 2. Internship in the Past 12 Months (Yes/No), by Graduation Status (n=205)



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

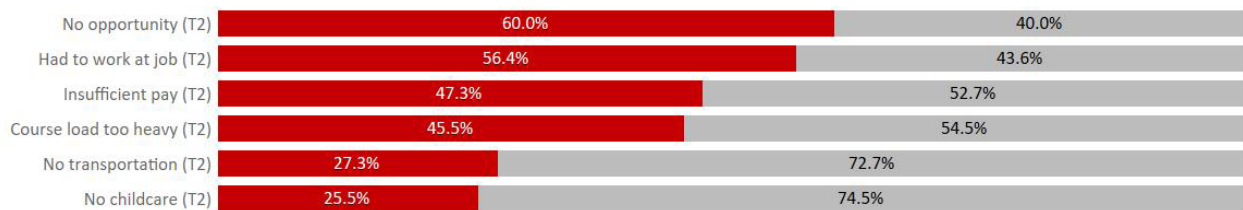
In this section, we present findings regarding the respondents who reported not having participated in an internship in T1 or T2. Of the 174 students who did not participate in an internship in T1, 89 students (51.2%) reported that they were interested in doing so but were unable to take part of an internship experience. In T2, of the 170 students who did not do an internship, 78 students (45.9%) reported being interested in doing one. Moreover, 55 of the 89 students who were interested in doing an internship in T1 (61.8%) 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 internship participation at T1 for students who did not participate at either time (n=55)²



Note: Red bars represent the number of students who reported specific barriers and gray bars represent the number of students who did not report such barriers.

Figure 4. Barriers to internship participation at T2 for students who did not participate at either time (n=55)



Note: Red bars represent the number of students who reported specific barriers and gray bars represent the number of students who did not report such barriers.

In both T1 and T2, a *perceived lack of internship opportunities and the need of students to work at their current job* were listed as the most important barriers preventing students from participating in an internship. *Insufficient paid* offered by potential internship sites and a *heavy course load* were the next tier of barriers most cited. Finally, *lack of childcare or lack of transportation*, while being concerns for some students across time periods, were consistently the least cited barriers.

IV. RESULTS: STUDENTS' INTERNSHIP EXPERIENCES ACROSS T1 AND T2

This section focuses on students who reported separate internships at T1 and T2. We compared the survey measurement scores that characterize multiple internship program features and students' experiences. Additionally, to evaluate these program features' longitudinal nature, we also compared scores of each of the measures across the T1 and T2 surveys (see Table 3). Results showed that the mean scores of all features increased between T1 and T2. The only exception to this pattern was the score respondents assigned to the similarity they found between their internship tasks and those of an entry-level position at their intern organizations (which declined in T2). All other features received a higher score from respondents during the second round of data collection. The largest increases were observed in the mentoring students perceived they

² Participants could choose multiple barriers.

received from internship supervisors, and in the autonomy they experienced during their internships at T2. While all these increases suggest that students had better internships experiences at T2, it should be noted that the sample size is small and these observed differences are not statistically significant.

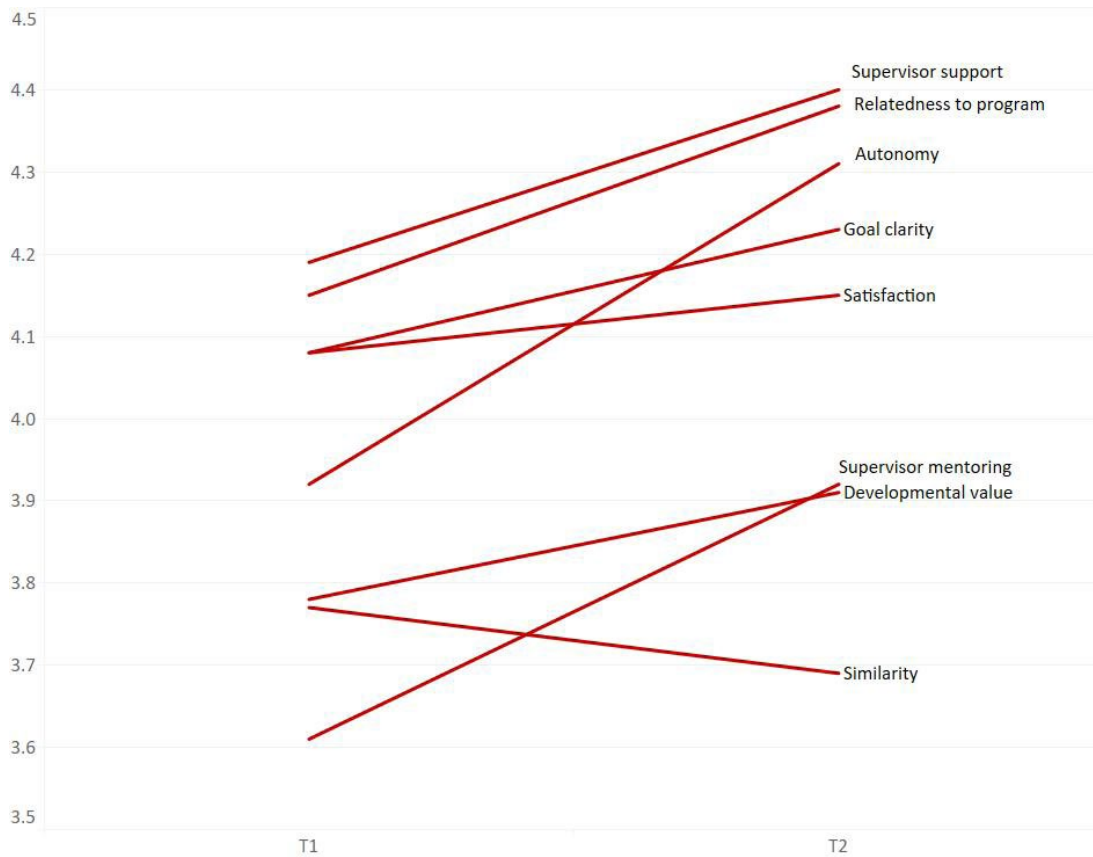
Table 3. Internship experience measurements³ (n = 13)

Internship Program Features	T1		T2	
	Mean	SD	Mean	SD
Supervisor Support (1= <i>not at all</i> , 5= <i>a great deal</i>)	4.19	0.71	4.40	0.59
Supervisor Mentoring (1= <i>never</i> , 5= <i>extremely often</i>)	3.61	0.94	3.92	0.80
Goal Clarity (1= <i>not at all clear</i> , 5= <i>extremely clear</i>)	4.08	0.67	4.23	0.73
Relatedness to academic program (1= <i>not at all well</i> , 5= <i>extremely well</i>)	4.15	0.69	4.38	0.87
Autonomy (1= <i>not at all</i> , 5= <i>a great deal</i>)	3.92	0.98	4.31	0.69
Similarity (1= <i>not at all similar</i> , 5= <i>extremely similar</i>)	3.77	1.01	3.69	1.10
Internship satisfaction (1= <i>not at all satisfied</i> , 5= <i>extremely satisfied</i>)	4.08	0.64	4.15	0.80
Internship developmental value (composite score of 10 questions, all 1-5)	3.78	0.75	3.91	0.61

³ The perceived **supervisor support** scale consists of four items assessing the way the internship participants evaluated their relationship with their supervisor. The **supervisor mentoring** scale assesses the provision of direction and feedback about task performance and career planning using five items. The **goal clarity** scale consists of two questions and aims to capture how clear the job duties were for the intern. The **relatedness to academic program** question measures how related a student feels the internship was to their academic program. The **autonomy scales** measure how much flexibility and freedom the participant had in his or her job. Lastly, the **similarity** question captures how similar the participant's tasks were at his or her internship to those of an employee at an entry-level position at the organization. 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 (Wolfgram et al., 2021).

Figure 5 shows the change in these scales between T1 and T2. None of the changes are statistically significant.

Figure 5. Change in internship experiences over time (n=13)



V. RESULTS: JOB MARKET PERFORMANCE AND PSYCHOSOCIAL OUTCOMES

By the second wave of data collection, 49 of the 205 respondents had graduated from GLTC. Among the 49 graduates, 38 of them (77.6%) were employed. The remaining 11 students who were not employed at that time attributed their unemployment to lack of employment opportunities and other personal reasons, including medical issues and family responsibilities. Importantly, many of these reasons were triggered by the COVID-19 pandemic.

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

For the 38 employed college graduates, the average number of months that they searched for a job was 4.3 months, with a standard deviation⁴ of 8.3 months. This average was mostly caused by some extreme cases: one

⁴ The standard deviation is a measure of the amount of variation of a set of values. A low standard deviation indicates that values are close to the average, and a high standard deviation means that values are spread out over a wider range.

respondent reported searching for a job for 36 months, and another two reported job search times of 23 and 24 months. Without these extreme cases, the average job search time was 2 months, with a standard deviation of 3.2 months. As shown in Figure 6, 36.8% (n=14) of respondents found their jobs *very* or *extremely* related to their majors in college. However, an equal number of students reported that their current jobs were *not at all* related to their field of study, and an additional 13.2% (n=5) of students said their jobs were only *a little* related to their majors. This indicates a sizeable degree of discrepancy between fields of study and current career paths.

Figure 6. How much is your current position related to the field you studied in college? (n=38)

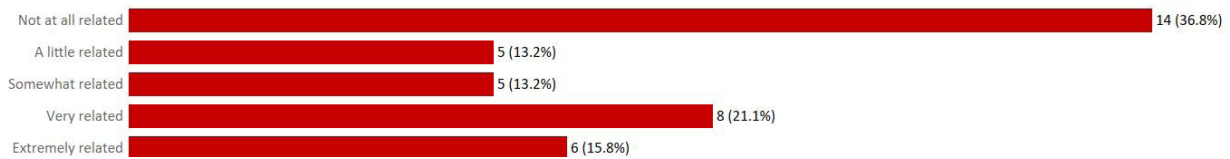
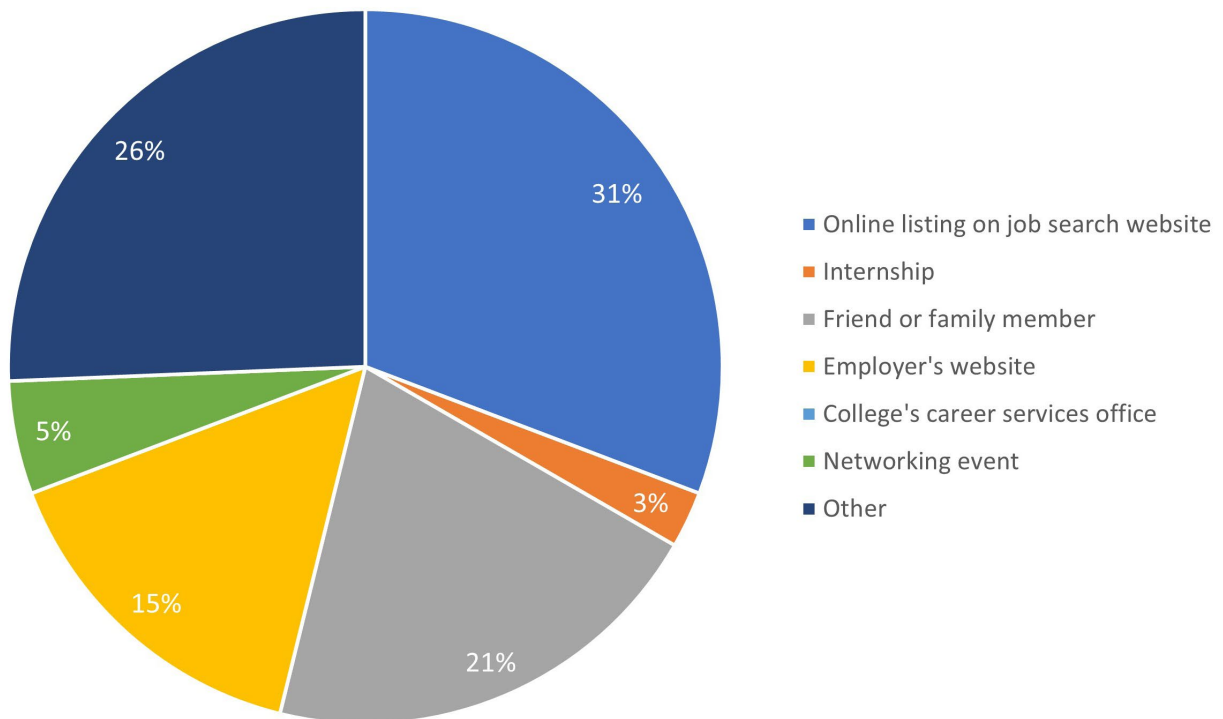


Figure 7 shows the students' job searching methods. It demonstrates that online listings in job search engines, opportunities through family members and friends, and searching directly on employers' websites are the most important approaches to finding jobs, while internship participation exhibited limited impact.

Figure 7. How did you find out about your current job? (n=38)



Note: Participants could choose multiple job search methods

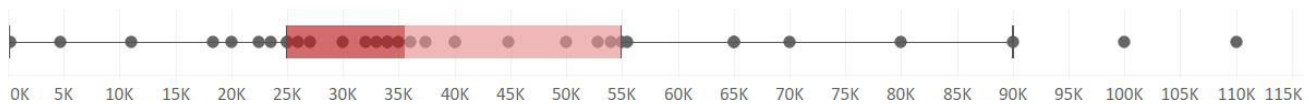
Among the 38 employed graduates, 15 had internships before graduation. Only seven of them responded to the question about whether their internship led them to their current job. Five of them indicated that it *definitely didn't*, and only two responded that it *probably* or *definitely* did (see Figure 8).

Figure 8. You indicated that you previously had an internship(s), did your internship lead to your current employment? (n=7)



Thirty-two students reported their annual income. The average income of these students was \$40,211, with a standard deviation of \$24,475; the median income⁵ was \$34,500. Figure 9 shows the distribution of their annual income.

Figure 9. What is your estimated annual income (before taxes or other deductions)? (n=32)⁶



Survey results: Job market performance by groups

Twenty-three of the 38 employed graduates did not participate in any internships during college (60.5%), three reported internship participation at T2 but not T1 (7.9%), eight reported internship participation at T1 but not T2 (21.1%), and four reported participation in an internship at both T1 and T2 (10.5%). The job market performance of these four groups of students is compared below.

We compared the average job search time in months among the 38 respondents who were employed at the time of the survey by internship participation groups. The shortest average search time was for those students who had an internship at T1 but not T2, at 1.29 months. The longest average search time was for students who had done internships at both times, but this is just a consequence of the presence of an outlier in the distribution: one respondent reported searching for a job for 36 months. Without taking extreme cases into account, the other three internship participation groups reported broadly similar times of job searching at about two to three months. These differences between groups were not statistically significant.

Students who had some internship experience said their jobs were more related to their field of study, compared to students who did not do an internship during college (see Figure 10).⁷ Respondents who did

⁵ Median is a value that separates the higher half from the lower half of a data sample.

⁶ The gray box represents the 25th and the 75th percentiles. The line separating the dark and light boxes is the median. The lines extending out from the box represent the minimum and maximum, excluding outliers. Outliers are values above the 95th percentile of the distribution.

⁷ The relatedness between current job and college major was measured by one single question asking, "how much is your current position related to the field you studied in college?" using a 5-point Likert scale from 1=Not at all related; 2=A little related; 3=Somewhat related; 4=Very related; 5=Extremely related

an internship at T1 but not T2 scored the highest at 3.6 (on a 1-5 scale), while students with no internship experience scored the lowest at 2.3. The difference between internship participants and non-participants is statistically significant ($p = 0.04$, $t = -1.796$, $df = 36$).

Figure 10. How much is your current position related to the field you studied in college, on scale 1-5, by internship participation? (n = 38)



Among the 32 employed graduates who reported their income, those who had internship experiences at both T1 and T2 had the highest average annual income (\$47,833), and those who had internships in T2 but not T1 had the lowest average annual income (\$26,700, see Figure 10). The difference between average incomes for students without any internships and students with at least one internship is not statistically significant.

Figure 11. What is your estimated annual income (before taxes or other deductions), by internship participation? (n = 32)



In sum, most of the students who graduated were employed and most indicated that their current jobs were not related to their college majors. The majority of students reported that their previous internships did not lead to their current employment. When asked specifically to list how they found their job, *online job searches*, *contacts through friends and family*, and *direct searches in employer websites* were the most common responses. These two pieces of information about respondents are consistent in the sense that participating in an internship seems to not have been a very common approach to finding a job. Still, the data does show that graduates who had participated in internships tended to score their jobs as more related to their college majors compared to employed graduates with no internship experience. Last, students who participated in multiple internships reported the highest annual income.

Though a larger sample size would be required to confirm these findings, results point to the significance of internships in students' post-graduation labor market performance, especially regarding job earnings and its relatedness to 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 experiences on student's employment outcomes using a data set 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 respondents rate 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 205 students. In general, the scores of all four dimensions—control, control, curiosity, and confidence—show decreases from T1 to T2. We found that, with the exception of the difference in the Confidence subscale, all other differences are statistically significant, including the overall career adaptability composite score.⁸

We then assessed individuals’ career adaptability development over time for different internship participation groups. The observed differences are not statistically significant, with the exception of that observed for the group with no internship experience. This group is also the largest in size, and the lack of statistical significance found in the differences observed for the other groups may be due, in part, to their smaller size.

The identified longitudinal decreases of career adaptability are aligned with literature findings that suggest that career adaptability is a dynamic process and students with an initial high level of career adaptability may experience longitudinal decreases in their career adaptability dimensions except for curiosity. That means individuals may become less in control of, concerned over, and confident in terms of their career prospects over time. In previous studies, curiosity remained stable over time (Negru-Subtirica et al., 2015).

Table 4. Career Adaptability Results across T1 and T2 (n=205)

Career Adaptability Composite and Sub-Scales	T1		T2	
	Mean	SD	Mean	SD
Career Adaptability Composite	3.71	0.72	3.57	0.73
Sub-Scale: Concern	3.71	0.77	3.53	0.82
Sub-Scale: Control	3.79	0.86	3.63	0.82
Sub-Scale: Curiosity	3.63	0.83	3.49	0.83
Sub-Scale: Confidence	3.71	0.81	3.61	0.89

⁸ Statistical significance determined given at $p < 0.001$ for all differences.

Career Adaptability Composite Score by Internship Participation	T1		T2	
	Mean	SD	Mean	SD
Internship at both T1 & T2 (n=13)	3.69	0.84	3.67	0.84
Internship at T2, not at T1 (n=22)	3.99	0.57	3.86	0.64
Internship at T1, not at T2 (n=18)	3.94	0.71	3.86	0.73
No Internship at T1 or T2 (n=152)	3.65	0.72	3.48	0.72

Interview results: Student internship outcomes

From the 22 students who participated in the initial interview (T1), 18 students participated in the follow-up study (T2). Among the 18 participants, 13 participants self-identified as female, five as male. Eight participants at T2 identified as white, four as black, two as Latina, two as mixed-race, and two as South Asian American. The interviewed students came from various fields, including health and human services, IT fields, criminal justice, and the natural sciences. More than half (n=11) students had already graduated from GLTC, six of which transferred into a bachelor’s program. Others were employed or seeking employment. COVID-19 delayed graduations and posed challenges for the job search for several students, as detailed in the next section on the impact of the pandemic on students’ education and careers.

Ten of the 18 students interviewed at T2 had completed an internship. They shared a wide range of experiences. Below we describe the most frequently mentioned outcomes of their internships, which include: exploration of field and career goals, learning and skills development, increased self-confidence or motivation, networking, resume boosting and employment (Table 5).

Table 5: Perceived Outcomes of Internship Participation at Great Lakes Technical College (n=18)

Outcomes	Examples
Exploration of field and career goals	Changing or narrowing the focus for a specific career goals, determining a positive or negative career fit.
Learning and skills development and real-world experience	Learning and practicing skills specific to the field or job, including applying skills learned in the classroom to the work environment or gaining hands-on experience that is different from a classroom setting.
Increased self-confidence or motivation	Developing a feeling of personal independence and efficacy, increased motivation directed towards personal growth, pursuing a particular career, or finishing an academic program.
Networking	Developing connections with other people in the field or workforce who can support future job searches
Resume boosting or employment	Referencing internship on a resume to improve employability; transitioning from internship to part- or full-time regular employment.

The benefit that GLTC students most frequently described regarding their internship experiences was having the opportunity to explore a professional field and crystallize their career goals, both in terms of positive and negative career fits. One student, for example, described how her internship helped her realize that she wanted a job that had both applied and administrative aspects:

“I really appreciate actually having gone through the internship, because like I said, it taught me more about myself as a human service worker, what I want to do or where I'm headed. Because I've always felt that, you know, I want to be hands-on, hands-on, hands-on. And while that is a part of what I want to do, I would like to find a nice balance between the two. Sometimes you need a break from people, and it's nice to be at work behind the scenes sometimes.”

Students also emphasized a variety of skills they were able to obtain, ranging from communication skills to technical know-how. One student even described her internship as a two-way learning experience for both her supervisors and herself:

“I taught them a lot of things that they didn't know about their program, and, you know, how to upload things and RDA's and stuff like that. [...] So just, you know, helping people from home through the web. That was something that was really new to me. It was something I had to really teach myself, was how to, you know, share my screen and show people, you know. So, you know, I just felt like I was entering like a new phase of living here. It was a lot of working with people over Zoom for stuff like that. And a lot of back and forth emails. [...] It was a lot of learning, we both learned on both ends.”

As a special kind of learning possible through internships, students often emphasized out-of-classroom learning or “real world experience”. A baking and pastry arts graduate, for example, illustrated this contrast through the different types of supervision she received in class and during her internship:

“It's real-life experience, because it can be different in school. Like in school, we did have an actual café class, where we was serving the public, checking them out, making the food, cleaning up, being served safe, and things like that. But it still kind of felt like a class because you, of course, have the teachers watching over you and stuff like that. But—in [name of café], it was like we trained on this, and we're doing this. The boss is also on the line doing her things, so she's not like hovering over you, making sure you're doing everything right. She's still watching, making sure everything runs smoothly, but it's more hands off other than the teachers and stuff.”

For many students, the experiences and insights gained through their internship, as well as the feedback they received from their co-workers and supervisors, increased their motivation to pursue a certain career path and strengthened their confidence in their abilities. This social services student was able to confirm her passions and pinpoint her career aspirations through her internship experience:

“It pretty much solidified that I was making the right decision because I was so torn between what I really wanted to do with my life. I didn't really know what my purpose was. And I kind of found my purpose in that internship, just knowing how it made me feel at the end of the day, it wasn't just about having a job or getting a paycheck. It was about helping our community and seeing the change, that the small changes I'm making help someone in the community that could possibly help others.”

Besides these personal benefits, students frequently highlighted the value in the relationships they were able to build through their internships—networks that supported them both professionally and personally. One criminal justice graduate, for example, continues to draw on her internship mentors, as she takes the next steps in her career:

“That network bond [is something I gained from the internship]. Because it's not always about what you know, but who you know, so getting to know other officers and other faculty in the department. So then you're able to, you know, finally get into that organization. (...) I'm still in touch with some of the officers that were kind my mentors. I still talk to some of the people within law enforcement. (...) I haven't talked to them yet [about the new job I'm applying to], I do have to call them today or tomorrow.”

For several students, such connections were not only key in terms of mentorship, but also functioned as important credentials for their job search, often leading to further opportunities or full-time employment. An electrical engineering graduate, for example, credits his subsequent job and fellowship to his internship experience:

"I never would have gotten the job at [name of company] if I hadn't worked at [name of internship site]. Because the person who hired me at [company], used to work at [internship site]. I had worked there in the same intern position when my [company] boss was working there. And so the fact that he was able to reach out to his little buddy at [internship site], and ask him how I was. Then this other guy who I didn't work with very closely, was able to give me a glowing review, I was able to get the job at [company]. Without that experience at [internship site] and that, you know, handshaking like networking, I never would have gotten the job at [company]. I never would have gotten the scholarship if I hadn't worked at [internship site]. The fact that I have two repair positions underneath my belt, prior to applying for the scholarship, is the reason that I got the test engineering position at [2nd company]."

Overall, these examples illustrate how, over time, students were able to leverage internship experiences in their favor for various positive outcomes, including exploration of field and career goals, learning and skills development, increased self-confidence or motivation, networking, resume boosting and employment.

Interview results: Student experiences with COVID-19

While students benefitted from their internships in multiple ways, they also faced diverse challenges in pursuing and completing internships—many of which the COVID-19 pandemic exacerbated. Our interviews with GLTC students occurred in Spring 2021, one year into face-to-face teaching restrictions. As such, we sought to understand how the COVID-19 pandemic had impacted GLTC students over time. We were interested in exploring how their internship experiences, career development, and academic trajectories had been influenced by the onset of the global pandemic.

Many students described holding multiple jobs, frequently changing jobs, or being temporarily unemployed during the last year. For many, this instability made it challenging to cover living expenses and college tuition. As one student illustrates:

"Yes, I got less hours. I was working at an ice cream shop as a supervisor. But with it, they gave us less hours. And so I ended up on unemployment. It was kind of altogether between that job and then unemployment, you get the same amount. So that was really before COVID hit. And then after that, I ended up just finding another job for a while."

This added instability and the challenges of balancing work, school, and family during a pandemic likely made internships less of a priority or possibility for many students. Among our 18 interviewees, only two had taken an internship during the last year. They were able to find virtual internships that allowed them to work from home while completing the internship hours required for graduation from their programs. A human services student, for example, found an internship with a non-profit, during which she supported the organization with record-keeping, publications, and social media from home while taking care of her two school-aged children. Here she describes the experience of transition from searching for her internship to graduating and enrolling in a new college during the pandemic:

"I wanted to try to get through virtual school. So that was a challenge. And then finding an internship was a challenge. I was scared that I was not going to be able to graduate when I did, because I didn't think that I would find an internship in time to graduate, or an internship that had enough hours for me to complete"

to graduate. So, the main effect that I have just enrolled into a school, and I've never been to it because of COVID. So, I honestly really don't know what I'm getting myself into other than reading reviews. I've never been to the school, and they are closed and they are only doing virtual school at the moment. So that's kind of scary. Yeah, I've never seen a school. I just learned where it was at, actually."

While this student was able to successfully graduate as planned, other students' graduation timelines were delayed, due to various factors, such as financial concerns around tuition, conflicting family responsibilities, mental and physical health, or struggles with virtual learning. Many students characterized online learning as "more stressful" and spoke about difficulties such as the need to access equipment, fewer opportunities for hands-on learning and interaction with classmates, as well as inhibitions to ask questions online and barriers to accessing feedback from professors. One baking and pastry arts student, for example, described her experience of completing baking exercises from home:

"They were telling me, 'Oh, bake this recipe at home.' And send us pictures and videos and a paragraph of like, did it go right? Did it turn out right?' and stuff like that. But at the same time, it's like, a lot of those recipes they had used a certain amount of ingredients. And I'm like, I know they're not trying to have us buy the specific ingredients, but anything to be honest, during the pandemic, when people's jobs might be affected [is a burden]. But luckily, it was pretty easy. (...) And I, yeah, I got through it. (...) But I had other another friend who (...) had a baking class they had to do online. And they had to bake, and a teacher was trying to get them to buy these ingredients and actually bake it and send pictures. Like they was real strict about it."

While, as described above, for some students online learning was challenging, others were able to transition without major difficulties. For several students, taking classes from home was even favorable, for example, because they were able to accommodate other responsibilities or health needs better this way. One student, who is a father of two, describes his preference for virtual learning and work like this:

"I'm thriving in the COVID world. Because I have a wife and two children. Being able to work from home, like doing school from home, is a godsend. If I can finish my degree online, I would be ok with it. So, that's kind of where I stand, I love it. It's a lot easier than I thought it would be."

Similar to this student, many students appreciated the "break" and "having more time to reflect" that social distancing provided. Others stated that "too much time to think" made them second guess their choices and aspirations of pursuing higher education. Many students brought up mental health struggles that intensified during the pandemic. As one student described:

"It kind of affects your, like, sense of purpose and kind of self-worth because we—our society is really based on, like, how much work you can put out, you know? And if you're working... And so working again has been really good for that. But, yeah, that was one way that I was affected (...) Like, everything with COVID really affected me mentally. I'm a pretty social person. And so, like, I was one of the good people that, like, didn't go hang out with friends and go to bars, or anything. Like, I completely, like, cut off my social interactions from other people and then slowly, like, started hanging out again. And so, like, being inside so much really isn't the best for me. It definitely increased my anxiety issues again and things like that. And just, like—even, like, socializing, like, is more difficult now."

Despite all these challenges, students were able to draw on various resources and strategies to cope. Friends, family, and colleagues were frequently mentioned as important sources of emotional support. Students referred to music, exercise, books, and creative activities as key ways to relax during the lockdown. Some even described developing new strategies or habits, like being more purposeful about self-care. This student, for example, disclosed her family finding new ways to spend time together:

"I don't know if it's a good strategy or coping mechanism, but we really are not a family that watches television and yet COVID has absolutely made us have like our shows that we're kind of excited to all sit together and watch. It's definitely been a coping strategy that's helped us get through a lot of this. It's kept us busy and, you know, spending time together. I know we're sitting in front of the TV, so it's a little different but, yeah, that's been something that's kind of different we're not used to."

Several students mentioned appreciating the resources and support offered by GLTC, such as laptops being made available, access to computer labs, or the extension of student loans. Students acknowledged instructors generally being very flexible, understanding, and accommodating. As one student describes:

"I just asked questions after class or any time I was having an exam I would try to email as quick as I can and get a response. But our teacher's like, at the beginning they did give us their cell phone numbers just in case they don't get to their email right away or just in case you needed a quick response to something, so we were able to text them and be like, hey, I need this right away or, hey, can we do this so we can get this done."

In summary, our interviews highlight the great variety of students' experiences with the pandemic and its impacts on their internships. Thanks to the support from university staff and educators, most students were able to fully transition to online learning. The interviews do however also call attention to a trend: The pandemic—and with it increased family responsibilities, fluctuation in jobs, and mental health stressors—made the attainment of internships more challenging for most GLTC students. This seems to be a factor worth considering when defining graduation requirements post-pandemic, as well.

VI. CONCLUSIONS AND RECOMMENDATIONS

The first round of data collection for the *College Internship Study* at the Great Lakes Technical College indicated that there were social and economic barriers that some students faced to participating in internships. It also suggested that students who participated in internships had relatively high career adaptability, as well as positive outcomes internship outcomes, including internship satisfaction and perceived internship developmental value. Furthermore, these internship outcomes were associated with high quality of 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 intern's autonomy in performing their work ([Wolfgram et al., 2021](#)).

The findings of this one-year follow-up study indicate that barriers to internship participation persist for some students, particularly the need to work at paid jobs and the lack of internship opportunities relevant for students' fields of study. They also highlight several noteworthy longitudinal outcomes of internship participation. Students who graduated from GLTC with multiple internships had higher average incomes than graduates with one or no internships. Respondents who had graduated by T2 and had participated in

an internship found their jobs more related to their fields of study than students who had not participated in an internship. At the same time, most of the students who graduated and were employed, said that their internships did not lead to their current employment. When asked specifically to list where they found their job, online job searches, contacts through friends and family, and direct searches in employer websites were the most common responses.

Thinking of internship experiences themselves, nearly all aspects of the internship experience improved from T1 to T2 for students who did internships at both times. This indicates that, likely, the second time around students were more able to take advantage from their internships in a way that was more meaningful to them. Lastly, thinking of all respondents in general, survey participants reported a decrease in career adaptability over time, which is consistent with previous literature that has found decreases in career adaptability dimensions as individuals progress through different stages in life.

The [first report](#) from the *College Internship Study* at GLTC contained recommendations for students, educators, and employers to ensure quality internship experiences for 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 continuous paid employment—and educators and employers are encouraged to find ways to remove this barrier by finding ways to compensate interns whenever possible.
- There is evidence that multiple internships may be associated with additional positive outcomes, including higher annual income after graduation and closer connections between employment and fields of study in college. However, there is a lack of evidence that internships help students secure jobs. Better connections between internships and job opportunities would greatly benefit students at GLTC.
- It is encouraging that students who participated in internships at T2 reported increases in all aspects of their internship experience, especially when students were dealing with the strain of the COVID-19 pandemic. Deeper reflection and assessment of the things that worked better for students doing internships for a second time would provide valuable lessons for others, specifically, in helping them identify their needs and suggesting ways to reap the benefits from an internship.
- Career adaptability plays a significant role in college students' school-to-workforce transitions. Regarding the identified decreases in students career concern from T1 to T2, educators and internship employers are encouraged to proactively offer support for building student readiness and resources for dealing with present and future career challenges (Savickas, 2013). Practitioners are encouraged to help students access more vocational opportunities, not only internships but also various work-based learning and career exploration activities to help students make important connections between education and work.

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**The College
Internship Study**

The College Internship Study is generously supported by the Bill & Melinda Gates Foundation.

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.

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