# Examining the Relationships Between Mandatory Career Courses, High-Impact Practices, and First-Destination Outcomes

by

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Abstract

The rising cost of education and competition among universities has led to consumer demands for information pertaining to their return on investment. Universities have been encouraged to provide first-destination outcomes for graduates as a way to show the value of their degree programs. To strengthen these outcomes, many programs encourage or mandate high-impact practices and career courses to prepare emerging adults and adult learners for the transition to employment or further education. However, little is known as to the impact these practices actually have on the first-destination outcomes of these graduating students. Furthermore, the impact of these practices during the COVID-19 global pandemic has not yet been fully evaluated. Using data obtained from a mandatory first-destination survey and the Campus Engagement and Experiences Survey, along with demographic information, at a large southeastern public university for graduates in December 2019 (just before COVID-19) and December 2020 (during COVID-19), this study explored the relationships between high-impact practices and mandatory career courses with first-destination outcomes. Using Pearson chi-squares and multinomial logic regressions, differences between the cohorts were examined and added value of experiences was analyzed.

A Pearson chi-square resulted in significant differences being observed for first-destination outcomes among those who graduated just before COVID-19 and after with more graduates still seeking opportunities and continued education six months after graduation among the 2020 graduates. Significantly more graduates from the December 2019 cohort participated in one or more high-impact practices. The greatest differences were seen with the decrease in internship, co-ops, and study abroad experiences among the mid-pandemic cohort. Completion of co-ops, internships, undergraduate research, and working while enrolled at the university had

significant relationships with positive first-destination outcomes in both cohorts. Mandatory career courses were shown to only add significant value above and beyond high-impact practices for those in the 2020 cohort admitted to continuing education programs. Further study is needed to examine how emerging adults and adult learners are acquiring the skills and experiences needed to transition to life after college.

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| | |
|---|---|
| AAACE | American Association of Adult and Continuing Education |
| AAC&U | American Association of Colleges and Universities |
| AACB | American Association of Colleges of Business |
| AACSB | Association to Advance Collegiate Schools of Business |
| ACP | Academic and Career Planning Office |
| ACT | American College Testing |
| AEE | Association for Experimental Education |
| AU | Auburn University |
| BLS | U.S. Bureau of Labor Statistics |
| CACREP | Council for Accreditation of Counseling and Related Educational Programs |
| CCQ | Career Competencies Questionnaire |
| CDL | Career Development Learning |
| CDMSE | Career Decision-Making Self-Efficacy |
| CEES | Campus Engagement and Experience Survey |
| Co-op | Cooperative Education Experience |
| CTI | Career Thoughts Inventory |
| ELT | Experiential Learning Theory |
| FDS | First-Destination Survey |
| GPA | Grade Point Average |

| | |
|---|---|
| GRE | Graduate Record Exam |
| GMAT | Graduate Management Admissions Test |
| HIP | High-Impact Practice |
| MBA | Master of Business Administration |
| MIT | Massachusetts Institute of Technology |
| NACE | National Association of Colleges and Employers |
| NSSE | National Survey of Student Engagement |
| NSTC | National Student Transcript Clearinghouse |
| OAI | Office of Academic Insight |
| OIR | Office of Institutional Research |
| OR | Office of the Registrar |
| PSEO | Post-Secondary Employment Outcomes |
| SAT | Scholastic Achievement Test |
| SERU | Student Experience in the Research University survey |
| STEM | Science, Technology, Engineering, and Math |
| U.S. | United States |
| WIL | Work-Integrated Learning |

# Chapter 1

## Introduction

The pursuit of knowledge has been the foundation of higher education institutions since their inception. Despite this foundation and reluctance of some faculty and administrators, the evolution of societal demands has forced universities to shift from a primary focus on knowledge and preparing well-rounded adults to prepare students to be competitive in the job market and a global workforce. It is no longer enough to simply instill subject matter expertise; universities are also expected to create career-ready global citizens skilled in marketing their skills and abilities effectively to potential employers who can successfully navigate the job search. Connecting the knowledge learned in the classroom to the world of work is now a necessity and academic programs are being asked to assist in this effort to support the positive career outcomes of job obtainment or continued education acceptance for their students.

How to effectively prepare students for the transition into the workforce is still being examined by those in career services and higher education administration. Efforts to assist with this in higher education include career service offices, courses teaching job search skills, increased offerings of experiential learning opportunities, as well as many other efforts attempting to connect students with future employers. Campbell et al. (2019) described, “Instead of viewing employability as an ’add-on’ to higher education, this emerging position views employability as a frame for successful curriculum design and pedagogic practice in higher education” (p.503). This intentional focus on skills needed for employment is important when the economy is strong, but even more crucial in times of economic uncertainty. Employers reported that new graduates do not display the needed skills to be considered career-ready causing students and employers to place blame on the institutions (NACE, 2020; Bentley

University, 2014a). Despite this report from employers, the understanding of how adults best learn the skills needed to confidently enter the workforce, or pursue further education, is an area ripe for exploration. The skills needed for employment are difficult to define, let alone teach in the context of each discipline, and therefore it can be a real challenge for universities to implement a standard evaluation and teaching practice (Green et al., 2009). Because the return on investment is often measured by the outcomes of graduates, including employment status or graduate school acceptance rates, this information is compiled and reported by institutions across the United States (U.S Department of Education, 2020; U.S. Bureau of Census, 2019). With the rising cost of tuition, universities are finding themselves striving to prove a positive relationship between a degree earned and a positive career outcome or risk lower enrollment moving forward.

The Center on Budget and Policy Priorities reported that between 2008 and 2018, state funding for public universities has not kept up with inflation, averaging 13% less per student, contributing to the average tuition increase of 37% (Mitchell et al., 2019). To justify the rising cost of education, there has been a demand for universities to account for the outcomes of students. These outcomes are being used to determine a return on their investment by assessing the value of degree programs and educational institutions. For instance, if a university reports an average starting salary of $40,000 for graduates with a degree in elementary education and a median salary for the state of $54,000, but the tuition costs more than $100,000, some may question if the degree is worth the investment or if another university would be a better option. Institutions have tracked their students after graduation for the past decade, but without specific guidelines or definitions, it is a challenge to accurately compare the information (NACE, 2014). To standardize the reporting of these outcomes, the National Association of Colleges and Employers (NACE) created the First-Destination Survey (FDS) in 2014 and called for

universities to report their findings for publication annually entitled First Destination Outcomes for the Class of [insert year]: Findings and Analysis. NACE charged universities from around the country to use the FDS as a way of creating a common data set by standardizing the surveys sent to graduating seniors. The FDS uses consistent language and questions to determine the job search status, graduate school acceptance, or military status of graduates up to three months after graduation. NACE compiles the data from all participating schools and publishes the national trends to better understand the current climate for graduates nationwide. Although participation is not required, universities who report their student outcomes receive recognition from NACE in the publication and a free copy of the report. Meanwhile, universities use their institution findings to showcase student successes by publishing on their websites, often in interactive dashboards. Since this data may sway the decision to enroll in a program or university, improving the means of collecting this information from graduates has been a common initiative on campuses (NACE, 2019b). Fearing a negative impact on enrollment and budgets, more universities are requesting students report this information before the culmination of their degree (NACE, 2019b). Follow-up phone calls, surveys, and LinkedIn data mining have become best practices to ensure the most up-to-date information and high knowledge rates (NACE, 2019b). FDS data were reported starting before graduation and up to six months after graduation, making this continued follow-up essential to represent the outcomes of graduates accurately. The importance placed on the outcomes of students upon graduation has put career planning and development at the forefront for university administers and college Deans.

Whether graduating students are landing jobs, gaining acceptance to additional educational programs, or unemployed can be difficult to track, but important for universities to understand. Efforts have been made to assist these emerging adults in the transition from college

to career including career development courses both in and out of the official program curriculum. In a review of 74 articles that reviewed career courses in higher education, Reardon et al. (2011) found that the major themes from the course outcomes included positive impacts on vocational identity, cognitive development, career-decision making, and career maturity. Only one study was found that examined the link between career courses, graduation rates, and GPA (Hansen et al, 2017).

In addition to career courses, a focus on high-impact practices (HIPs) to explore activities out of the classroom that may impact career outcomes has developed in higher education (AAC&U, 2007). The term HIP was introduced by Kuh (2008) and has been associated with student development and learning, with first-year seminars and internships linked to four- and six-year graduation rates (AAC&U, 2007; Johnson & Stage, 2018). Through HIPs, students gain experience and build career readiness skills sought by employers (Bathmaker, Ingram, & Waller, 2013).

Career advancement has long been a catalyst and motivator for adults to seek graduate education, but the cost and accessibility of programs can be a barrier (Pope, 2020). According to the U.S. Bureau of Labor Statistics (BLS), the demand for master's degrees in the job market is projected to grow at a rate of 16.7%, the fastest among all degrees, by 2026, followed by doctoral degrees; faster than 2019 overall average at a rate of 4% (Rolen, 2019). The 2020 Job Outlook published by NACE, showed that surveyed employers reported that 13.1% of new college graduates hired in 2019-2020 would hold master's degrees or higher. Moreover, the starting salary for those graduating with a master's degree was 29.6% higher than those with a bachelor's degree for the 2018 graduating class (NACE, 2020). In addition to the increase in graduate degrees earned and the appeal of higher salaries, the BLS has shown a trend for higher

degrees being required for entry-level jobs in specific career fields (Rolens, 2019). Given the rise of educational requirements from bachelors to advanced degrees, some have argued that degree inflation has occurred (Fuller et al., 2017). This inflation proves more challenging for those in the low or middle class to compete in the job market due to financial strain and the high cost of higher education (Fuller et al., 2017). The demand for advanced degrees is rising while accessibility and affordability are declining which could lead to an even greater disparity of wealth and access in the future.

At a time when degree requirements are escalating and the need for first destination data with positive outcomes is prioritized, we face a global pandemic that has greatly impacted the economy and job market. COVID-19 caused the United States to hit a stand-still beginning in March 2020 forcing employers and universities to adapt quickly in terms of the modality of services to ensure the safety of employees, customers, and students. The uncertainty of the economy and changes in operations brought about the cancelation of many HIP internships and co-ops during summer 2020, leaving students lacking the needed experience to land a job or even fulfill curriculum requirements (Gallop, 2021 & Stansell, 2020). Glassdoor reported a 52% drop in internship openings between March and April 2020 due to COVID-19 (Stansell, 2020). With the BLS (2020) reporting an unemployment rate at 8.4% in August 2020, and no immediate signs of dramatic improvement, many students experienced anxiety about the climate of the job market (Gallop, 2021). Uncertain in the economy, some students decided to enter graduate programs as a means of putting off their job search (Gallop, 2021).

Universities feared enrollment declines causing them to scramble to ensure the safe delivery of courses to students, including smaller class sizes and increasing online delivery options (Smalley, 2020). Furthermore, many advanced degree programs waived entrance exam

scores for admission as access to the exams was limited and there was a need to maintain program enrollments (Hu, 2020). After shifting the Graduate Record Exam (GRE) to fully online delivery in response to COVID-19, access to computers with webcams, stable internet connection, and private spaces needed for the four-hour exam became obstacles and brought to question the integrity of the exam (Hu, 2020). Concern with exam integrity may have resulted in a shift to waive entry exams for admission, however, also may have inadvertently may have increased accessibility to advanced degrees. Students who previously were reluctant to apply due to the exam requirements may now have better opportunities to pursue advanced degree programs, removing a hurdle once faced by many adults seeking continuing education (Hu, 2020). Furthermore, the increase of online course options due to social distancing may also allow the opportunity for advanced degrees for those with demanding schedules or non-traditional students. The combination of delaying the job search and easier entrance requirements may result in an increase in graduate student admissions in the future. This would make career courses focused on the process of applying to continued education and the job search even more important.

## Statement of Problem

Career courses have been evaluated to determine effectiveness in relation to self-efficacy and learning in specific degree programs, but research exploring the longitudinal impact of these courses related to first-destination outcomes is lacking. No studies could be found exploring the relationship of these courses with acceptance rates for further education. Much of the current research on graduate school acceptance focuses on grade point averages (GPA) and admissions test scores but is lacking in the examination of the impact of HIPs or career courses. Similarly, HIPs have increased in higher education courses due to correlations with retention, yet little is

known as to how they influence the success of students outside of the university (Johnson & Stage, 2018). This brings about the problem that little is known about how adult learners are acquiring the needed skills for employment and continued education.

Given the unique time with the COVID-19 global pandemic affecting all aspects of the economy and education, the impact on first-destination outcomes and HIP participation has not been explored fully and is worthy of examination.

## Research Questions

The following research questions were used in this study:

1. Is there a difference in first-destination outcomes for students graduating just prior to the start of COVID-19 global pandemic and students graduating during?
2. Is there a difference between high-impact practice participation by students graduating just prior to the start of COVID-19 global pandemic and students graduating during?
3. Does enrollment in a mandatory career development course add value above and beyond high-impact practices when predicting first-destination outcomes?
4. Does enrollment in a mandatory career development course add value above and beyond high-impact practices when predicting first-destination outcomes during the COVID-19 global pandemic?

## Significance of Study

Preparing students for the transition to the workplace or graduate school is in the best interest of universities that want to demonstrate positive career outcomes and justify the cost of the high tuition. To best prepare students for this transition, it is important to understand how adults are learning the needed skills to make these transitions. By examining the impact of mandatory career courses and HIPs on first-destination outcomes, there will be a better

understanding of how this learning is taking place. By understanding how this learning is taking place, universities can improve the alignment of resources for this effort to support positive career outcomes and show a better return on investment for students.

The unique nature of a global pandemic has impacted the economy and higher education in ways that cannot yet be fully appreciated. Through examination of HIPs participation and first destination outcomes of graduating undergraduate students, before and during this time, we can begin to see how the pandemic influenced the decisions and experiences of undergraduate students and be better prepared for future economic crises.

## Limitations

The timing of this study may lead to limitations given the impact on hiring practices due to COVID-19. The job market has changed due to high unemployment rates, a decrease in hiring, and changes in recruitment practices. Many universities have also shifted to a primarily online course delivery model with fewer on-campus events or opportunities for involvement. These alterations may impact both enrollment and perhaps motivation to continue education as a result.

This study focused on a large (25,000-35,000 students) public research university in the Southeast and may need to be replicated on additional university campuses before generalizing to the total population. The student demographic of this specific university is 96% traditional-aged students between the ages of 18-25, with over 77.4% identifying their ethnicity as White in fall 2020. Given the limited timeframe of this study, additional longitudinal studies may be helpful to determine the impact of career courses and the retained information within the first few years after graduation.

Lastly, the data utilized in this study was self-reported primarily. Self-reported data used without additional methods of validation can demonstrate response bias from the subjects which

can result in issues of internal and external validity. Based on how the students understand the question or their level of honesty, the responses may be biased toward socially desirable outcomes.

## Assumptions

The following assumptions were made as part of the research:

A. The students involved in this study are representative of students enrolled in the university with differing graduation semesters.

B. Participants answer all questionnaires honestly and consistently.

C. Career development courses provide similar content across academic units.

## Definitions

1. Adult – "in relation to educational activities for adults, participants are usually persons aged 16 or older, with some adult roles related to work, family, voting, drinking, driving, and sometimes completion of full-time preparatory higher education," (AAACE, 2019).
2. Adult learning – "process of acquiring and retaining knowledge, attitudes, and skills," (AAACE, 2019).
3. Andragogy – "The art and science of helping adults learn" (Knowles, 1984, p.6). Parameters of adult learning and education attribute to what it is as a scientific idea and concept. Knowles's life work and research attempted at developing a theory specific to how adults learn or why they learn. The term has since been used in various capacities such as the reference to techniques and methods that instructors may use to get adults to learn (Knowles, 1980).
4. Advanced degrees – educational pursuits that exceed a bachelor's degree and include master's degree, doctorate, Juris doctorate, medical degree, etc.

5. Bachelor's degree – degree awarded after completion of at least 120 approved credit hours with 60 hours of general education courses and 60+ hours of major-specific coursework (Auburn University, 2020a).
6. Career development learning – "the acquisition of capabilities that are useful to the lifelong development and management of one's career, grounded in an ongoing authentic learning-based process that builds knowledge of the world of work and one's self" (Bridgstock et al., 2019, p.57).
7. Career intervention – "counseling treatment or effort aimed at enhancing individuals' career-related development or decisions" (Whiston, Sexton, & Lasoff, 1998, p.150).
8. Career shock – "A career shock is a disruptive and extraordinary event that is, at least to some degree, caused by factors outside the focal individual's control and that triggers a deliberate thought process concerning one's career. The occurrence of a career shock can vary in terms of predictability and can be either positively or negatively balanced" (Akkermans et al., 2018, p.4).
9. Curriculum – model plan for classes needed for a student to complete a degree program containing core/general education courses and major-specific classes (Auburn University, 2020a).
10. Emerging adult – "a developmental stage that is neither adolescence nor young adulthood but is theoretically and empirically distinct from them both, spanning the late teens through the twenties, with a focus on ages 18 to 25" (APA, 2021).
11. First-destination positive outcomes – self-reported outcomes by graduating seniors having secured a part-time job, full-time job, entered into military, or accepted into continued education within 6-months of graduation (NACE, 2020).

12. Full-time student – student enrolled for 12 or more semester credit hours (Auburn University, 2020a).
13. High Impact Practice – experiential learning opportunities completed while in college including first-year seminars and experiences, common intellectual experiences (core curriculum), learning communities, writing-intensive courses, collaborative assignments and projects, diversity/global learning (study abroad), service learning, internships, undergraduate research, capstone courses/projects, and ePortfolio (Kuh, 2008).
14. Mandatory career development course – mandatory course within the curriculum discussing materials, techniques, and application process for jobs as well as to graduate or professional school.
15. R1 – Doctoral Universities – Very high research activity (Carnegie, 2017).
16. Retention – persistence in the same area of study as the original institution; persistence in the same institution but changing majors; persistence within the educational system by transferring institutions (Leppel, 2002).
17. Senior – undergraduate student having completed 90 or more semester credit hours in their undergraduate degree program but has not yet completed the baccalaureate degree (Auburn University, 2020a).
18. Semester/Term – subdivision of academic year which lasts approximately 15 weeks during fall or spring and 10 weeks for summer (Auburn University, 2020a)
19. Traditional college-age students – those 18-24 years of age seeking bachelor's level degrees.

## Organization of the Study

This study sought to understand the relationship between career outcomes and participation in high-impact practices (HIPs) or mandatory career courses in graduating students. Many studies focus on the association of HIP participation and retention and graduation rates, and the impact of career courses on career decision-making self-efficacy; no studies have examined the relationship of these variables on the career outcomes of students. The gap in knowledge needs to be researched due to the rising cost of tuition and the increased demand for return on investment for the degrees being earned. The results of this study may serve multiple stakeholders, including university leadership and deans, university students, and employers. Chapter 2 includes a review of the relevant research as well as a theoretical overview. The method of the study and measures used for the collection and analysis of the data are described in Chapter 3. Chapter 4 contains the description of the analysis and interpretation of the data utilized in this study to address the research questions established for this study. Conclusions, implications of the findings, and suggestions for further study are detailed in Chapter 5. The references for this study are provided after Chapter 5 and proceeded by two appendixes.

# Chapter 2

## Literature Review

To better understand what is already known in the literature and what is missing, concerning adult learning and career development in college students, this chapter will include a critical analysis of these topics. In particular, a review of andragogy, Kolb's Experiential Learning Theory, career development in the curriculum, high-impact practices, work-integrated learning, and research concerning the impact of the recession on student career development and first-destination data.

## Adult Education and Theories

The teaching of adults is not a new concept, but the study of how adults and emerging adults learn is a relatively young field. Due to social changes in the mid-1800s including the start of the Women's Rights Movement, education became a focus of community shifts (Pope, 2000). The formal crusade for adult education did not occur in the United States until the early 1900s with the educational activities aimed at those who immigrated to the United States and were promoted fully after World War I (Muetz & Frush, 2007). Much like the field of career counseling, this movement aimed to assist those returning from the war in their efforts to find jobs by providing education and training needed for the workforce (Pope, 2000). It was with this effort that extension systems, universities, and trade schools began gaining in popularity. After World War II and the depression, the focus of adult education turned to illiteracy, and federal funding and policies were introduced. The Adult Basic Education program was established in 1964 and later brought about the creation of the National Advisory Council on Adult Education. By the 1990s, the broad focus narrowed exclusively to literacy with the National Literacy Act,

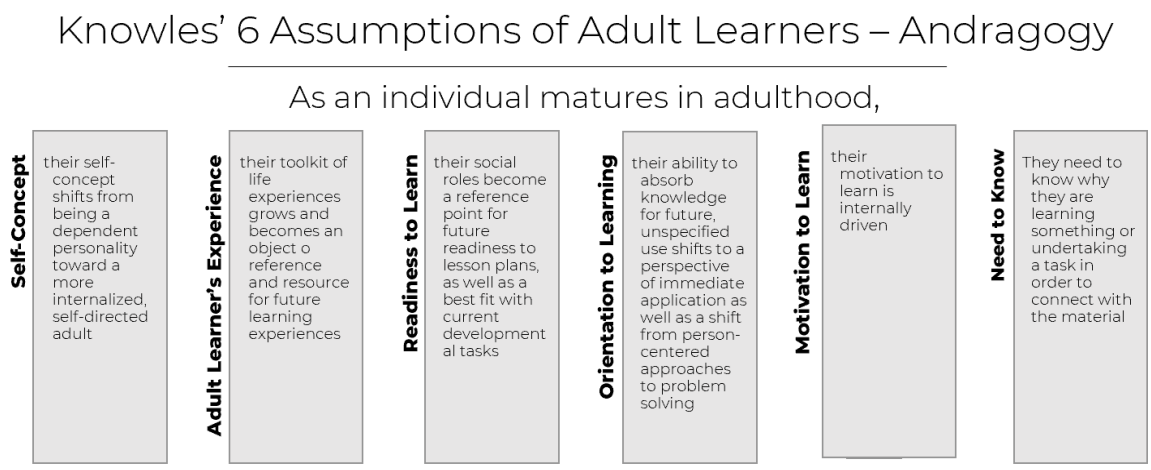
bringing about a division in the field state (Rose, 1991). Unlike the education of children, there is no state legislative mandate to support adult education initiatives, differing levels of support and coordination in each state (Rose, 1991).

The concept of andragogy was introduced by Alexander Kapp, a German educator, in 1833 and later adapted into a theory by Malcolm Knowles, an American educator, in 1975. Knowles (1975) noted that the way adults learn is distinctly different from the way children learn and therefore should not be part of pedagogy. Up until this point, research was focused primarily on how children acquire knowledge and simply assumed to apply to adults as well. As shown in Figure 1, Knowles (1984) proposed that four assumptions can be made about the characteristic differences of adult learners, and later added a fifth and sixth (Knowles et al., 1998). These assumptions help better inform instructors or educators on how to approach teaching or training an adult learner.

Knowles' theory was not without criticism. Some asserted that these principles and assumptions were more about the characteristics of adult learners and less about how they learn (Merriam & Caffarella, 1991). Hartree (1984) pointed out the inconsistency between these assumptions and the actual definition of andragogy as the "art or science of helping adults learn" since this theory did not identify an actual model of teaching. Despite these debates, this theory serves as the foundation of other learning theories which makes it worthy of review.

**Figure 1**

*Knowles' Six Assumptions of Adult Learners*




*Note:* Adapted from Knowles, 1984; Knowles et al.,1998

These assumptions of adult learning focus on the transition of maturing into adulthood but did not specifically discuss the process of transitioning as its own unique developmental stage. The concept of emerging adulthood was not introduced until Arnett (2000) coined the concept and postulated that this specific period between adolescence and adulthood warranted a developmental stage and name. In developed countries, the focus of this life stage has shifted over the years but is marked today in the U.S. by the role of higher education, the transition from school to career, and the establishment of romantic relationships (Tanner & Arnett, 2009). It is the inclusion of higher education and the transition to careers that can be seen throughout other research and theories.

**Experiential Learning Theory**

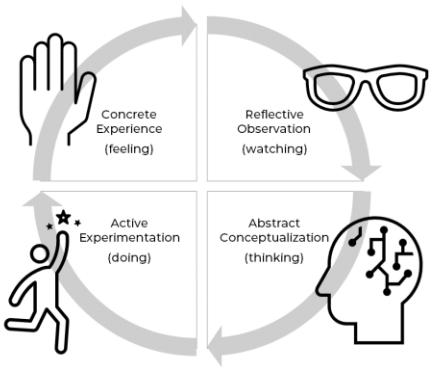
One of these adult learning theories was developed in a university to better understand how to educate students in a management course at the Massachusetts Institute of Technology (MIT). This Experiential Learning Theory (ELT) was defined by Kolb and Kolb (2017) as, "a particular form of learning from life experience, often contrasted with lecture and classroom learning," (p.13). Originally introduced by D. Kolb in 1971, by 2016 this learning theory has

been used in over 4,100 scholarly articles and books (Kolb & Kolb, 2017). According to this theory, the learner must complete a four-step learning cycle including as shown in Figure 2:

1. concrete experience
2. reflective observation
3. abstract conceptualization
4. active experimentation (Kolb, 1971).

**Figure 2**

*Kolb's Four-Step Learning Cycle*

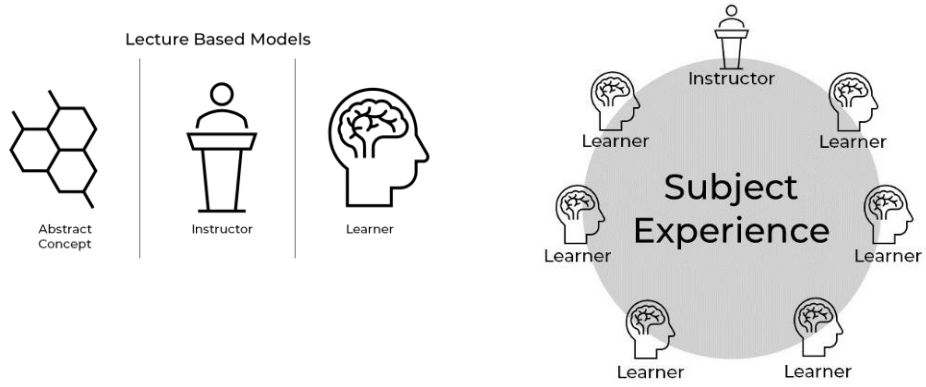



*Note:* Adapted from Kolb, 1971

With the focus of this model being on experiential practices, it changes the dynamics of the instructor/educator to learner relationship. In traditional lecture learning environments, the instructor relays abstract concepts to the learner or students, known as teacher-centered. In experiential learning, the educator and learners all experience the subject content, as demonstrated in Figure 3. This experience may take the form of problem-based learning, expert panelists, service projects, or even internships because they all allow the learner to experience what is being taught and allow for reflection of the active learning.

**Figure 3**

*Lecture Based Models vs. Experiential Learning Model*




*Note:* Adapted from Kolb, 1971

To facilitate the ELT approach, an integration of six propositions from John Dewey, Jean Piaget, William James, Carl Jung, and Carl Rogers was later adapted by Kolb and Kolb (2009):

1. Learning is best conceived as a process, not in terms of outcomes.
2. All learning is relearning.
3. Learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world.
4. Learning is a holistic process of adaptation.
5. Learning results from synergetic transactions between the person and the environment.
6. Learning is the process of creating knowledge.

Early on, Kolb and Plovnick (1976) began connecting this theory to career development with the publication of The Experimental Learning Theory of Career Development. This study examined the correlation between ELT and the major selection of students attending MIT. Using the Learning Styles Inventory developed by Kolb in 1971, 800 students and practicing managers were assessed and their results were correlated with their academic major. Kolb and Plovnick

(1976) found that business majors fit with the accommodative learning style, engineers in the convergent, liberal arts areas were divergent, and mathematics and chemistry were assimilative. These results showed that experiences in learning that mesh with preferred learning styles reinforce and influence future learning and work environments and those experiences that do not align with preferred learning styles tend to move the student away from similar environments (Kolb & Plovnick, 1976). These findings suggest that the earlier students engage in a work environment connected with their major, the sooner they may find a fit in their field of study or shift to another more in line with their learning style.

Support for ELT to be used in the training of career practitioners has been established. Hayden and Osborn (2019) proposed a method of training new career practitioners using the foundation of meaningful experiences as a way of solidifying knowledge. They outlined a series of experiences such as engaging in career assessments, creating a career autobiography, presenting on a special population, and creating a "constructivist resume," as ways to engage the student in learning while still meeting the standards outlined by the Council for Accreditation of Counseling and Related Educational Programs (CACREP) (Hayden & Osborn, 2019). This overlap of learning and established connection to career development are the reasons for ELT being used as the framework for this study.

Building on Kolb's framework, the Association for Experiential Education (AEE) has stipulated, "challenge and experience followed by reflection leading to learning and growth," and have identified the following principles of experiential education:

- Experiential learning occurs when carefully chosen experiences are supported by reflection, critical analysis, and synthesis.

- Experiences are structured to require the learner to take initiative, make decisions and be accountable for results.
- Throughout the experiential learning process, the learner is actively engaged in posing questions, investigating, experimenting, being curious, solving problems, assuming responsibility, being creative, and constructing meaning.
- Learners are engaged intellectually, emotionally, socially, soulfully, and/or physically. This involvement produces a perception that the learning task is authentic.
- The results of the learning are personal and form the basis for future experience and learning.
- Relationships are developed and nurtured: learner to self, learner to others, and learner to the world at large.
- The educator and learner may experience success, failure, adventure, risk-taking, and uncertainty because the outcomes of experience cannot be predicted.
- Opportunities are nurtured for learners and educators to explore and examine their values.
- The educator's primary roles include setting suitable experiences, posing problems, setting boundaries, supporting learners, insuring physical and emotional safety, and facilitating the learning process.
- The educator recognizes and encourages spontaneous opportunities for learning.
- Educators strive to be aware of their biases, judgments, and pre-conceptions, and how these influence the learner.
- The design of the learning experience includes the possibility to learn from natural consequences, mistakes, and successes (AEE, n.d.).

These principles, along with the work of Kolb, lay the foundation of support for the use of work-integrated learning or high-impact practices as a component of ELT.

**Work-Integrated Learning and High-Impact Practices**

The promotion of experiential learning has been proven to be a useful endeavor for students as well. Experiential learning can also be considered work-integrated learning (WIL), which combines what is being taught in the classroom with practical applications and may include internships, co-ops, industry partnered projects, fieldwork, and relevant part-time employment (Pegg et al., 2012). WIL is a way for students to develop the career competencies and soft skills needed by employers and has been shown to increase the chances of having a job upon graduation (Miller et al., 2015).

Jackson and Wilton (2016) examined the impact of WIL on career competencies. This study involved 480 university students in the United Kingdom and Australia representing a variety of majors. The students completed an electronic survey with Likert scales and open-ended questions, encompassing the four dimensions of DOTS: a) development of decision-making skills; b) opportunity awareness; c) transition learning; and d) self-awareness (Jackson & Wilton, 2016). Each of the participants experienced a WIL experience either full-time or part-time, with some being placed into these experiences as part of their education program and others having to find their opportunities. Those who had participated in WIL reported developing career management competencies, familiarity with work-related activities, career confidence, and self-awareness (Jackson & Wilton, 2016). However, the same study showed that these students still rated themselves ill-equipped in managing the role of chance in career development, making this a needed added component of professional development during these opportunities (Jackson & Wilton, 2016). Although this study showed promising support for the use of WIL in the

development of career competencies, the reliability and validity of the self-reported DOT survey could be called into question since this information was not discussed. Also, there was no comparison to those who had not completed a WIL experience, leaving a question of if the career competencies were truly a reflection of the WIL or something else entirely.

WIL has overlapped with the experiences identified as high-impact practice (HIP) as well. The American Association of Colleges and Universities (AAC&U) through the LEAP initiative stresses the importance of connecting educators and employers to better prepare graduates. The AAC&U (2007) synthesized literature examining college impact and identified a set of the HIPs that proved effective in facilitating the learning and student development that is needed for success which includes the following:

- first-year seminars
- common intellectual experiences
- learning communities
- writing-intensive courses
- collaborative assignments and projects
- undergraduate research
- diversity/global learning
- e-portfolios
- services learning
- internships
- capstone courses and projects

Despite the positive implications to learning, a 2018 study by Johnson and Stage involving 101 institutions found that internships and freshman seminars were the only two HIPs

that were significant with four- and six-year graduation rates (2018). Kuh (2008) stipulated that student success can be obtained if universities, "make it possible for every student to participate in at least two high-impact activities during his or her undergraduate program, one in the first year, and one taken later in relation to the major field," (p.19-20). Furthermore, it is not enough to simply partake in an experience, six common elements were outlined to make the practices high impact:

1. they are effortful
2. they help students build substantive relationships
3. they help students engage across differences
4. they provide students with rich feedback
5. they help students apply and test what they are learning in new situations
6. they provide opportunities for students to reflect on the people they are becoming (Kuh, 2008).

With the importance of quality in these HIPs, Shavers and Mitchell (2019) investigated the practices being utilized in business programs in the United States. A survey was distributed to the business faculty attending the AACB assessment conferences in 2017 and 2018 which resulted in a sample of 100 faculty representing 28 schools, 95% accredited by the Association to Advance Collegiate Schools of Business (AACSB), and 86% being public institutions. Of the schools surveyed, 80% had internships integrated into the curriculum while 73.3% integrated student-faculty research. Despite the high rate of internship integration, only 29% of the schools reported evaluating these experiences directly. Using a Pearson chi-square test, no significant differences were observed among the size of the program and types of integrated HIPs, where

major-specific HIPs were integrated, formal system to coordinate HIP, or formal evaluation of experience (Shavers & Mitchell, 2019).

To address the noted lack of empirical evidence on the effectiveness of these HIPs, Soria and Johnson (2017) used data obtained by the Student Experience in the Research University (SERU) survey to gauge the impact of HIPs on self-reported multicultural competence and leadership development. The SERU is web-based and distributed to 14 large public universities with high research activity Carnegie Foundation classification. During spring 2013, the sample for this study was 11,997 with an average age of 21.17. Using factor analysis and least square regression it was demonstrated that academic level and program enrollment had significant associations with perceived leadership development with higher levels being connected to business majors and lower levels in STEM majors (Soria & Johnson, 2017). Those who had completed the HIPs of learning communities, common book, service-learning, or internships reported higher leadership competencies. Males, STEM majors, and those in higher social class backgrounds reported lower multicultural competencies while those who had completed HIP including first-year seminars, common book, writing-intensive course, service-learning, and study abroad reported higher levels. Despite the higher reported levels, no HIP was associated with statistically significant differences in either competency (Soria & Johnson, 2017). Further studies will need to be conducted to fully understand the impact of HIP since they are not solely intended for the development of these competencies, all data is self-reported, and there was no examination as to the specifics of the experiences.

Given the scope of HIP available, it is essential to understand why some students do not engage in these practices. Bielecki et al. (2018) sought to examine factors impacting interest and participation in HIP using undergraduate students enrolled in the Department of Agricultural

Leadership, Education, and Communications at Texas A&M University. Using a random sampling of 165, an electronic survey was sent out to measure the history of participation, interest in participation, and rated importance of HIP. The participant rated their level of interest in study-away programs and internships the highest. The HIP with the highest likelihood of participation were internships and intensive writing courses and no significant trends were shown for the level of importance. The strongest factors to influence participation included monetary costs, the time required, future employability, and the need for new experiences. When analyzed by gender, females showed significantly higher interest levels in HIPs than males. There were no significant differences found in the level of interest or likelihood of participation based on ethnicity (Bielecki et al., 2018). This study did not give a breakdown of the demographics of the sample population and had a relatively small sample size given the size of the student population. Despite this, the theme of cost and time barriers is likely consistent with general student populations and limit access to these experiences, which goes against the intent set by Koh in 2008.

Zilvinskis and McCormick (2019) also sought to explore why some students did not participate in HIPs. Using data collecting in the 2015-2016 National Survey of Student Engagement (NSSE) resulting in a sample of 207,837 seniors in the United States, they examined relationships between demographics and HIP participation. Chi-square tests of independence were used to determine if students who worked while enrolled differed in HIP participation, specifically service-learning and undergraduate research, and at different levels of work both on and off-campus. Full-time senior students who worked 20 or more hours per week on campus had a greater likelihood of participating in HIPs than students who did not work. Part-time seniors who worked 30 or more hours per week off-campus were 7% less likely to

participate in undergraduate research with faculty compared to seniors who did not work. Students who worked on campus up to 20 hours per week were two times as likely to participate in undergraduate research. Also, part-time seniors who worked on campus 11-20 hours per week were 25% more likely to participate in service learning compared to those who did not work. These findings seem to support the connection between student employment for 20 hours or less and engagement with the university.

The relationships made between student employment and positive engagement and retention have brought some to support efforts to expand the list of HIPs to include student employment. In the book, A Good Job: Campus Employment as a High-Impact Practice (2018) and later discussed in a webinar by Savoca (2019), McClellan, Creager, and Savoca made the case that student employment works into student development theories and provides greater support for students of all background withing the institutions. The authors provided case studies from three universities supporting this effort and showcased the student learning and professional growth demonstrated by working while enrolled in a university. Importance was placed on the role of a supervisor to help develop the student and not simply supervise to make this practice beneficial, however.

Also using the data collected in the 2015 Senior Transitions module of NSSE, Miller, Rocconi, and Dumford (2018) explored the correlation between HIP and early job attainment. The NSSE survey was collected from over 31,000 students attending 126 universities during the spring semester of their senior year which consisted of 84% enrolled full-time and 68% were traditional college-aged students. Of these students, 63% reported as female, and 65% identified as white, 8% were Hispanic/Latino, 7% were African-American/black, 7% were Asian/Pacific-Islander. Of those surveyed, 60% had plans to seek full-time employment after graduation while

23% reported plans to attend graduate school. A positive correlation between internships, service learning, senior capstone, and/or study abroad with employment outcomes and research, leadership, and community service with advanced education outcomes were shown. Using a binary logic regression, they found that those who had completed an internship were 25% more likely, and those who completed a senior capstone were 22% more likely to seek employment. Of those who were seeking employment, students who completed an internship reported being 2.5 times more likely to have solidified a job compared to students who had not participated in an internship. Those who completed a capstone were 49% more likely to have secured a position and those with service learning were 16% more likely. Those who participated in research with faculty and those who held a leadership role were more likely to have plans to attend graduate school by 65% and 23% respectfully (Miller et al., 2018). These findings empirically support what has long been assumed- the HIP chosen by students may depend on the desired post-graduation plans, in particular the correlation between internships, capstones, and service-learning with employment, and research and leadership with graduate school. The timing of this survey should be noted since it is likely that the majority of the students surveyed had not yet received offers for jobs or official acceptance into programs if administered in early spring. Since the survey itself does not include any further connection with these graduates after their spring semester, true first-destination numbers or correlations cannot be computed.

Since between 75% and 81% of universities require capstone courses in the curriculum, some have attempted to infuse a HIP within this mandatory course (Newton-Calvert & Arthur, 2018). To ensure this HIP is a valuable experience, Indiana University-Purdue University Indianapolis and Indiana University-Purdue University Columbus developed the HIP Taxonomy for Capstones based on five principles that must be present in capstone courses:

1. reflection on personal growth
2. significant time investment
3. integration of knowledge
4. tangible work, artifact, or product
5. public demonstration (Freeman et al., 2020)

Research by Freeman et al. (2020) demonstrated the effectiveness of this model in developing HIP in a capstone as well as articulating the student learning outcomes and engaging relevant stakeholders with two case studies. This taxonomy proves useful in the development of capstone, but no discussion was made as to the measurement of learning by the students or the impact of this infusion on graduate outcomes.

Due to the broad nature of high-impact practices, some have proposed intentional career exploration should be included in the list as an additional way to promote engagement and quality of academic interactions between faculty and students. Stebleton and Diamond (2018) advocated for a collaborative effort on campus to infuse career development and exploration in the university experience for first-year students.

**Career Competencies and Readiness**

Career competencies are defined as "knowledge, skills, and abilities central to career development, which can be influenced by the individual" (Akkermans et al., 2013, p. 249) and were divided into reflective, communicative, and behavioral. It was shown that those with more developed career competencies also had a clearer vocational self-concept and were better prepared to be employed in a variety of positions (Akkermans et al., 2017). Akkermans et al. (2013) expanded upon this idea by demonstrating that investing in the development of career competencies would result in an increase in career success and perceived employability when

validating their new Career Competencies Questionnaire with young professionals between the ages of 16-30. Blokker et al. (2019) expanded upon this idea and found that higher career competencies were more likely to have higher career satisfaction and less likely to seek external opportunities.

In 2015 the National Association of Colleges and Employers (NACE) began their Career Readiness Initiative, "to address a fundamental need for new college graduates and the professionals who serve their career development needs and recruit them into the workforce: a shared understanding of what is needed to launch and develop a successful career, a common vocabulary by which to discuss needs and expectations, and a basic set of competencies upon which a successful career is launched" (NACE, 2021). A combination of surveys from universities and recruiters informed this list of competencies sought by employers which were then reviewed, and behaviors validated by the program SkillSurvey. In 2021, these Career Readiness Competencies were revised to include:

1. career and self-development
2. communication
3. critical thinking
4. equity and inclusion
5. leadership
6. professionalism
7. teamwork
8. technology (NACE, 2021)

Based on these competencies, universities have been tasked to educate students on developing and marketing them effectively to employers.

## Higher Education and Employment

### Degree Requirements for Jobs

Since the recession, there has been a steady increase in new jobs created going to workers with college degrees, leading to an increased focus on higher education preparing students for the workforce (BLS, 2019; Carnevale et al., 2016). Carnevale et al. (2016) explained that during the recession, many lost their jobs just as new college graduates were entering the workforce. This caused a supply and demand dilemma, where there were more educated applicants than jobs open that required this education, leading college-educated professionals to work in positions that did not use their education. This was seen at all degree levels and is now called underemployed. When the economy improved, these workers left for higher-paying positions, leaving the employers to seek new employees and often requiring college degrees from applicants for the first time for these positions. This degree inflation has created a need for advanced degrees at a higher rate than previously seen (Fuller et al., 2017). Fuller et al. (2017) found that in 2015, of the 1.4 million first-line supervisors, 34% had bachelor's degrees, however, 70% of the job posting for this type of position listed a bachelor's degree as a requirement. This increased demand for college degrees is being felt at the undergraduate and graduate levels. Wolniak and Engberg (2019) stated, "Attaining a graduate degree, while having a relatively modest effect on early career earnings, significantly improves an individuals' prospects for working in a challenging, learning-oriented job, and leads to greater job satisfaction and commitment" (p.851).

With this increasing demand for advanced degrees, it would stand to reason that knowing how to best prepare students to enter graduate school would be important for universities. When

exploring the research available on this topic, the results were slim and only represented specific programs.

There is research on the use of undergraduate GPA and graduate school entrance exams as predictors of success in graduate programs, and the results have supported these as predictors of GPA in graduate school (Siegert, 2008). In Siegert's 2008 study, the admissions process of 22 executive MBA programs was examined. She found that graduate GPA and Graduate Management Admission Test (GMAT) had a .64 mean correlation with undergraduate GPA (Siegert, 2008). These results were supported by other studies in the past. However, little is known about the experiences of students who are or are not accepted into these programs.

LeCrom et al. (2016) examined the predictors of graduate school and early career success for a specific sports management program using a mixed-method case study design. This involved surveying 104 alumni aged 21-52 with the M= 24.31and using a secondary data set of employment of alumni. The results indicated no significant relationship between success during graduate school, measured by GPA, or short-term career success and any of the 13 independent variables with included test scores, relevant work experience, and student-athlete status in undergrad (LeCrom et al., 2016). These results are interesting and unique in the literature, but given the specific nature of the field, may not be generalizable to other graduate programs. After thorough searches and consultation with a research librarian, this was the only study found that examined elements that were not exclusively GPA and standardized test scores.

**First-Destination Survey Findings**

The desire to find out the career success of graduating students has been growing and has sparked national attention. NACE (2021) benchmarked universities and community colleges across the U.S. and 80.6% reported conducting FDS, down from 88.7% in 2019. The U.S.

Census Bureau is working to construct the Post-Secondary Employment Outcomes (PSEO) database in collaboration with the University of Texas system, public universities in Colorado, University of Michigan- Ann Arbor, and the University of Wisconsin- Madison. This database will consist of data from 1, 5, and 10 years after graduation including institution, degree level, and degree field to determine career success (U.S. Bureau of the Census, 2019).

Collecting this data to give an accurate representation of graduation outcomes has been a challenge and many universities are sharing methods to find a best practice in this collection. One data collection method is discussed at length in the 2016 article by Kelly and Walters who detailed the process being used by the University of Delaware with the class of 2014. To achieve a 65% knowledge rate for the class of 2015 to meet the NACE standards and a 50% knowledge rate for the class of 2014, a pilot was conducted by Institutional Research and Career Services using surveys in Qualtrics™ through emails from high-status administrators. The surveys were delivered to students electronically in fall 2014 and then again at on paper convocation which was then used to update the student data in Qualtrics™. Additional follow-up occurred at 3, 6, 9, and 12 months with an incentive to win an iPad, in addition to LinkedIn profile searches and NSTC data integration. This method exceeded their expectation and yielded a 61.7% knowledge rate in the first year despite staffing changes (Kelly & Walters, 2016).

**Career Services and Interventions**

Career services have been part of the foundation of universities since the early 1900s as a way of offering vocational guidance. This service transitioned in the 1940s into job placement activities and is now more focused on career counseling and building professional connections (Dey & Cruzvergara, 2014). In 2020, 71.3% of universities surveyed reported having a fully centralized department while the others evolved have evolved to a decentralized model

embedded into individual colleges and programs (NACE, 2020). Despite these changes, many of the services have stayed the same and it remains a voluntary resource for students to utilize. Due to the direct link between career services with recruitment and retention, elevated importance was placed in this area beginning in the early 2000s which quickly shifted to the importance of outcomes (Dey & Cruzvergara, 2014). For many programs, a more intentional intervention has been explored to better prepare students for their future career plans including possible graduate school entrance.

Using an established model infused in the Citadel Honors Program, Ragan (2018) has proposed the introduction of a credit-bearing three-course mentor-led series on Personal and Professional Development to be completed after a first-year experience course for all students. This series would have the goals of honing knowledge of the profession, verifying profession to student interests and abilities, establishing methods for goal achievement, developing faculty contacts, and improving skills related to research, writing, and discussion (Ragan, 2018). This article was written by the creator of the program is supported by two student quotes detailing the impact leading to likely bias. At the same time, it is stated that no quantitative correlation study has been done to study the specific effect of this course series on graduate school attendance rates or job satisfaction. Given the small size of the Citadel Honors Program of approximately 100 students, it is also not clear how this program could be scaled to reach larger populations and unique needs of students.

Rajecki et al. (2005) implemented a brief career education intervention consisting of a booklet to 300 undergraduate psychology majors at Syracuse University and Indiana University-Purdue University Indianapolis. The students were asked to read the booklet and the information was then discussed in the class and pre and post-test design was used to measure the impact of

the information provided on the student views of career and graduate school. Using 3(X 2) ANOVAs, the intervention was shown to have impacted the students' views. 64% of the students rated their probability of acceptance to graduate school lower on the post-test and 41% named additional actions they could take to better their chances (Rajecki et al., 2005). This study showed the power of even a brief intervention on the beliefs and planning of undergraduate students. No information was reported however on the ages, sex, ethnicity, socio-economic status, or class standing for these students which would help determine time from and group-specific intervention.

Taking another approach, Hall et al. (2016) created a post-graduation program targeting underrepresented students in the biomedical sciences field with the goal of greater acceptance into Ph.D. programs. Interested students apply for the year-long program and those selected are paired with a faculty mentor and participate in preparatory sessions for the GRE, interview preparation, research/laboratory experience, formal presentation, and writing training, and critical analysis practice. Of the 45 participants over five years, 91.1% transitioned directly into biomedical Ph.D. programs, two entered master's degree programs, and one accepted an industry position (Hall et al., 2016). Surveys of the alumni of the program showed the importance of team building and mentorship. Given the rate of success for these students who had previously been rejected by programs, it can be concluded that had this opportunity been available prior to graduation, their chances of admission would have also improved. The authors of this study created the program being studied and therefore may give a more favorable view of the curriculum than someone unconnected. They gave little insight into the selection of students for the program so it may be assumed that those selected may have been competitive candidates for the Ph.D. programs already, even without the additional year of training.

To better understand different approaches to preparing career-ready graduates, Farenga and Quinlan (2016) classified the methods used by three top-ranked universities in Australia and conducted semi-structured interviews with the career service staff. They noted three distinct perspectives:

1. Hands-off approach – relying on the curriculum to teach employability skills and students to seek opportunities themselves.
2. Portfolio of Opportunities approach- offering six programs including a leadership program, careers skills modules, mentoring, summer internship, local job placement, and a volunteering program that tries to engage employers with students in a meaningful way.
3. Award approach- an employability path consisting of over 100 modules facilitated by academics and career services staff resulting in a formal recognition.

The Hands-off approach was determined to work well for students with labor-market awareness, established network, and privileged background that enabled them to engage in HIPs but not as well for other students. The Portfolio approach aims to provide support for a large student body while accounting for the segmentation of the market. However, less than 15% of students take advantage of these programs combined each year leaving a large population of students without. The Award approach fostered buy-in of academic programs and allowed for the career components to be embedded into the curriculum but still only 9% of the students registered for the award (Farenga & Quinlan, 2016).

This study is important as a lens to view the different roles that career services play in the development of students. Unfortunately, there were no parallels made between the methods used and the outcomes for students in terms of skills developed or first-destination outcomes.

**Career Development in the Curriculum**

Career development courses can be divided into career exploration and job search/life planning focus. Career exploration courses are typically offered in the first or second year and are almost always elective and often facilitated by career service staff. NACE (2020) reported General job search/life planning courses have been offered as elective courses and specific courses have been embedded into the curriculum of many colleges and majors.

Career development courses have been shown to be effective in the career decision-making self-efficacy (CDMSE) of students, as well as retention and graduation rates (Reese & Miller, 2006; Reardon & Fiore, 2014; Reardon et al., 2015). In a review of 64 career course outcomes from 1976-2014, Reardon and Fiore (2014) found that 91% of students who completed the courses noted positive gains in success measures. These gains included an increase in the likelihood of graduating, motivation, career decision self-efficacy, and sense of life/work meaning (Reardon & Fiore, 2014).

The effectiveness of a first-year elective career exploration course was examined by Fouad et al. (2016) and measured career engagement, adaptability, and career construction. Using a pre and post-test model, fifty-six first-year students enrolled in a public midwestern university enrolled in this course and completed the Occupational Engagement Scale for students, Career Adapt-Abilities Scale, Student Career Constructions Inventory, and their results were compared using paired sample t-tests. They found that the students who took the course showed a statistically significant improvement in occupational engagement, occupational exploration, decision making, and skilling/instrumentation (Fouad et al., 2016). This article was written by faculty and the director of a career development office but there was no mention as to who instructed the course, their background, or how the curriculum was developed. However, despite this lack of detail and no mention of demographics or current majors of these students in

this study, the results continue to support the importance of career interventions regarding career decision-making and retention.

Reardon et al. (2015) examined the impact that taking a credit-bearing career course had on graduation rates. For this study, the research team compared archival data of 544 students from a large southeastern university between 1989 and 1993 who completed a career course to 544 students from the same university and time that did not complete the course. They determined that the graduation rate of those who completed the course was significantly higher with 81.5% graduating in 6 years compared to 71.3% of those who did not take the course (Reardon et al., 2015). Further, they found that high school GPA and test scores did not have a significant impact correlate with graduation rates which conflict with other studies that support these elements as predictors of college success. These findings give great support for the importance of career development with students in the form of courses but again did not measure the impact after graduation leaving questions as to first destination outcomes.

However, Conner et al. (2012) tracked 3,338 students in a mid-western university throughout their educational journey and found significant relationships between graduation rates and ACT, SAT, income level of parents, and involvement in a Life Calling course. Despite these positive relationships, when using a multivariate analysis, no individual predictor emerged as significant, and the ACT/SAT scores had stronger associations with graduation rates than the course (Conner et al., 2012).

To improve outcomes findings for their students, universities are infusing career development into the curriculum. McDow and Zabrucky (2015) extended the previous research by comparing the job search materials of students enrolled in a career course within the business curriculum to those who may or may not have utilized the optional career center resources in a

large Southeastern university. The 116 participants included juniors and seniors who submitted a resume and simulated interview using the online software Optimal Interview as well as a self-efficacy and job search interest survey at the beginning of the semester and again at the end. The submissions were scored by one assistant using rubrics created by the author to maximize reliability. Both groups showed improvements in scores between pre and post, but it was determined that the business career course had a significant effect on the resume and interview skills of the students. However, the job-search self-efficacy scores for both groups showed no significant differences and remained high (McDow & Zabrucky, 2015). Only 57% of the students in the control group reported utilizing career events or optional career development resources during the study, which is consistent with the 2017 College Student Survey which showed 61% of students visited their campus career center or used their online resources (Gallup, 2017). This Gallup study (2017) surveyed 32,585 college students from randomly selected US universities and noted that students who spoke to faculty or staff often or very often about career options were 15% more confident in their ability to be successful in the job market. The findings of both of these studies support the intentional career discussions and the integration of required career courses into the curriculum.

Looking at a more specific curriculum, a study by Belser et al. (2018) examined a STEM-focused career planning course for undecided second-year students using pre and post Career Thoughts Inventory (CTI). The findings showed that students who completed the course reported a greater decrease in career thoughts compared to those who completed a seminar course instead.

Another curriculum-based study involved a career planning course to be mandated for psychology majors attending a regional state school (Thomas & McDaniel, 2004). This study examined 165 predominately Caucasian females and used a pre- and post-test design to examine

CDMSE knowledge of career information for psychology majors, and movement of vocational identity. Throughout the course, students engaged in an exploration of interests and values, necessary preparation for graduate programs, informational interviews, and career planning activities. Using separate t-tests, Thomas and McDaniel (2004) found a significant increase in the students' perceived knowledge of career options, CDMSE, and progress toward achievement of vocational identity. It is important to note that these were self-reported, and knowledge was not tested in this study. To address these issues, Thomas and McDaniel (2004) replicated the study with 72 psychology majors over two semesters with new questionnaires including a quiz measuring psychology major career information as well as the Career Exploration and Decidedness Inventory. The results supported the original study with significant increases in knowledge of careers for psychology majors as well as confidence in their ability to make appropriate career-related decisions. These results validate efforts made to infuse major-specific career preparation courses in the curriculum, despite the age of the study. Yet, there was still no examination as to outcomes for these students long-term.

Halonen and Dunn (2018), expanding on these findings, examined embedding career issues in upper-level psychology courses as well. The catalyst for this article was the lack of workforce preparation delivered in psychology programs and the inability for students to recognize the application of their skills being acquired. Halonen and Dunn (2018) stated, "In other words, psychology instructors and their departments need to do a better job at highlighting how discipline-based skills in psychology can lead to career success" (p.42). The strategies for enhancing upper-division courses recommended in this work included:

- highlight career-linked outcomes in the syllabus and project feedback
- create bookends of how the course applies to students' career goals

- highlight psychology-related job opportunities that are linked to the content
- emphasize communication strategies that transfer to the workplace
- create a workforce archive
- promote peer and self-assessment
- use external assessors

Furthermore, the addition of HIPs, career-focused presentations, mock interviews, and faculty training was recommended to bolster the program (Halonen & Dunn, 2018). These suggestions are robust, but no mention was made of existing models who have done this or any empirical evidence supporting such drastic changes.

Examining a different model, an elective course was designed to provide students with industry work experiences, introduce them to the work environment, and teach job search skills for third-year students enrolled in an Australian exercise science program (Reddan & Rauchle, 2012). Evaluations of outcomes included the pre-and post-Measure of Guidance Impact scale, participation, reviews of resume and application, interview performance, handbook completion, and reflection report. Of the 22 students involved in this study, 100% indicated a belief that career education should be part of a curriculum. The students rated the interview preparation, resume/application review, insights gained, and practical skills gained as the most important outcomes of the experience and had a significant gain in the Measure of Guidance Impact (Reddan & Rauchle, 2012). These results were positive, but the demographics of the students involved were not discussed in this paper leaving additional questions. Also, given the prevalence of graduate education needs in this specific industry, there was surprisingly no mention of graduate school preparation or education.

Campbell et al. (2019) examined the interviewed education and science faculty teaching employment courses in the same university. This study recognized the varied approaches in relation to direct pathway major of education and the varied pathway programs in the science fields. The science course aimed to empower students to navigate undefined post-graduate outcomes. One obstacle faced in both areas was the difficulty of faculty to balance their faculty responsibilities and personal workload for which the authors proposed the inclusion of career staff in these courses. In teaching these courses, the faculty involved reported a greater realization of the importance of career preparation for their students and felt a greater responsibility for assisting with this throughout all classes taught. This study was conducted in Australia, but all elements were consistent with the published concerns faced in the United States. No mention was given concerning the outcomes for students in these classes, how the curriculum was developed, or how faculty was prepared with current trends. Understanding the constraints faced by the departments and faculty is essential in campaigning for additional funding or an integrative approach when creating these program-specific courses.

In response to this demand for workforce preparation, a professional development career course was introduced for students majoring or minoring in sociology at Central Michigan University in 2017. Senter (2020) outlined this course and the experiential learning assignments it involved. Using a pre-and post-self-reported confidence scale, significant improvement was demonstrated in confidence on 10 of the 11 dimensions (Senter, 2020). The author examined the students' final portfolios and open-ended questions to gauge the perception of course helpfulness. These findings are beneficial in showing the impact on the students in the short term, but no additional information was collected to see if this knowledge was retained or if it led to success indicators for students upon graduation. Additional longitudinal data would be helpful

as a follow-up to this study. The instructor indicated having no experience or training in the formation of resumes or job search materials and did not mention consulting content-knowledge experts in this area. This leads one to question if the information or feedback given to students would be reflective of the views of employers or graduate programs.

All these major-specific career preparation programs are faculty-led with little discussion of partnerships with career service offices in the creation of content or instruction of the courses. Bridgstock et al. (2019) proposed a shift to a collaborative and comprehensive approach of career development learning (CDL) where career staff members are distributed into teaching units and assist in the curriculum design and delivery. Bridgstock et al. (2019) challenged the current models by asking, "If employability is now a central aim of university learning, why is CDL still addressed in a piecemeal 'bolt on' to the core curriculum?" (p.58). To examine how universities across Australia, Canada, and the United Kingdom are addressing CDL, interviews were conducted with 10 career service managers. The turning point for integration for these universities was shifting from student services into the academic side of the universities along with as well as having the support of top-level leadership, with more obstacles being reported by those without leadership support. To address scalability, a train the trainer strategy has worked for some as have online modules that can be placed into classes. A challenge faced by all career service areas has been resources and staff that has the needed niche skill sets to absorb additional workload and execute these new programs (Bridgstock et al., 2019).

Similarly, Meredith College worked with their career service team to collaborate on the absorption of needed job search preparation within the accounting program. Wessels and Sumner (2014) detailed the use of this partnership to infuse career development activities into pre-existing courses throughout sophomore through senior year, titled Career Tool Kit, instead of a

standalone class. Staff in the Academic and Career Planning Office (ACP) delivered presentations and facilitated workshops around resume writing, career exploration, professional communication, job search strategies, co-curricular experience, and interviewing. To evaluate impact, 118 participants were surveyed and 92.9% indicated having a greater sense of what employers want to see on resumes, and 25% planned to make an appointment to meet with ACP. Employers were also surveyed after a recruiting season and indicated being significantly more satisfied with the interview performance of students who were in this program compared to other students (Wessels & Sumner, 2014). This was the only study found that incorporated career services in the process of curriculum changes, in addition to using employer evaluations as feedback on effectiveness.

When looking at job satisfaction after graduation, a correlation was established between working in jobs related to one's major and higher levels of satisfaction (Wolniak & Engberg, 2019). This conclusion supports a greater need for intentional career counseling and/or career-oriented programming and interventions to help students in the selection of a major and career path, and build career decision-making efficacy (Wolniak & Engberg, 2019; Betz & Borgen, 2009). The use of career assessments with students as they are solidifying their major and career focus is also congruent with the fourth principle of ELT, learning is a holistic process of adaptation since the more one knows about themselves, the more capable one will be to adapt to new experiences.

Mason et al. (2009) sought to evaluate some of the more popular methods in England of infusing career planning in the curriculum of 32 departments across eight universities by evaluating graduate outcomes. Being the only study looking at first-destination outcomes as a

means of evaluating methods of preparation, it is important to view despite the age of the research. This study classified three distinct methods utilized across all academic areas:

1. teaching and assessment of employability skills in the department
2. employer involvement in course design and delivery
3. student participation in work experience through "sandwich courses"

This study looked at 3,589 graduates who were either employed or seeking employment in the First Destination Surveys conducted by their respective universities. When looking at students' job obtainment within six months after graduation, there was a significant correlation with those with jobs in graduate-level positions and participation in the work experience method as well as employer involvement in course design and delivery. There was no correlation found between these positive graduate outcomes and the method of teaching employability skills in the academic department.

Despite the evidence of positive outcomes demonstrated by these studies, the NACE 2019-2020 Career Services Benchmark Survey reported only 36% of university career centers, of the 497 schools that participated, offered for-credit career courses: down from 38% the year prior. It is not discussed if similar courses are offered by other staff or faculty on campus or through a specific curriculum, however, which would likely change the percentages. There is no compiled data showing the prevalence of career courses taught across campuses; much less any distinction between courses focused on career decision making versus job search/graduate school focused.

## Global Pandemic

To understand the unique challenges facing students and new professionals, we must examine recent events that are impacting the world in general. The United States, and the rest of the world, is experiencing the COVID-19 pandemic which has halted our way of living on numerous fronts beginning in early 2020. Many cities experienced stay-home orders making businesses and institutions halt or dramatically alter operations. Overnight, the use of virtual technology to conduct meetings and communicate became a necessary skill and educational institutions were forcing students to adapt to online learning for the foreseeable future.

For students, not being allowed to leave their homes to return to campus, while adjusting to a less familiar learning modality mid-semester, was an abrupt change. Employers felt this shift as well and many were forced to lay off workers or shut down. The Bureau of Labor Statistics reported the unemployment rate rising from 3.5% just prior to the pandemic in December 2019 to 14.8% in April 2020 and settling at 6.7% in December 2020 (BLS, 2021). Due to the economic impact, many employers were forced to retract internship or co-op offers, leaving students without experiential learning opportunities for the summer and fall semesters. Those who were able to secure an internship, often experienced them shifting to virtual settings, which altered the environment as well as the networking and learning opportunities for all involved. For those with an internship requirement in their curriculum, graduation delays were an immediate concern, and employment opportunities in the future became uncertain.

This global pandemic and ensuing economic climate have impacted everyone and could be described as a "career shock." Akkermans et al. (2018) defined career shock as:

> "A career shock is a disruptive and extraordinary event that is, at least to some degree, caused by factors outside the focal individual's control and that triggers a deliberate

thought process concerning one's career. The occurrence of a career shock can vary in terms of predictability, and can be either positively or negatively valenced" (p.4)

Using this concept and what we know about career competencies, Blokker et al. (2019) explored the relationship between positive and negative career shocks with career competencies and employability. Using a variety of social media platforms, 704 Dutch professionals under the age of 35, 73.9% female, were recruited for this study. The researchers administered the Career Competencies Questionnaire (CCQ) and the career satisfaction scale and asked participants to self-report the career success variables of salary, promotions, positive performance appraisals. Participants were asked to measure positive and negative career shocks on a 5-point scale with 0 meaning not having experienced the event and 4 meaning had a large impact. Eight items were measured to rate internal and external employability as well. The findings revealed that that career shocks seen as both positive and negative impacted the perceived external employability of the participants but did not impact the internally perceived employability (Blokker et al., 2019). This supports the idea that positive career shocks can boost self-confidence and negative career shocks can decrease self-confidence in your professionals. Due to the young nature of the idea of career shocks, more research is needed to explore the different types of shocks and the relevancy of each. Also, this study was conducted in the Netherlands whose labor market and social structure may not generalize to young professionals in the United States. Based on what we know about career shocks, it is safe to say that COVID-19 may be considered a negative career shock for many professionals, which may have impacted their self-confidence.

To measure the impact of the COVID-19 global pandemic on higher education, the Lumina Foundation and Gallup (2021) surveyed 6,005 students earning an associate or bachelor's degrees at non-profit public, non-profit private, and for-profit private institutions

across the country. Of the students surveyed, 33% of those completing bachelor's degrees and 38% of those completing associate degrees reported that they had considered stopping taking courses in the past six months (Gallup, 2021). Emotional distress was listed as the number two reason for considering stopping courses with 42% of bachelors and 24% of associate degree seekers, just behind COVID-19 (Gallup, 2021). This reason far outweighed the report of receiving a low-quality education, which garnered 15% of bachelor's level and 8% of associate-level responses (Gallup, 2021). Perhaps most surprising in this survey was the shift in perception of career resources available. When asked if the students were aware of their school offering career counseling, 38% of bachelor's degree students and 33% of associate degree students responded yes, down from 57% of students who had utilized career events or resources and 61% who had visited their career center or their online resources just three years earlier (Gallup, 2021 & Gallup, 2017).

Slowly the world is returning to a new normal with the introduction of vaccines. However, at the height of the pandemic, students entered a job market that had never been seen in the past and were uncertain of how to navigate. The closest comparison would be the recession and housing market crash experienced between 2007-2009. By drawing upon the research conducted on graduates during that time, connections can be made as to what students may be experiencing during this pandemic and how it will impact their perceptions moving forward.

## Impact of Recession on Emerging Adults

Stemming from the economic impacts on the job market beginning with the recession in 2007, emerging adults have been viewed as being delayed in their transition to adulthood. The increased time it took to find employment and lower salaries earned have prolonged the

timetable for those in the millennial generation to move out of the family home, get married, or have children, if at all.

Pisarik, Rowell, and Thompson (2017) found that traditional-aged university students reported feelings of general anxiety, existential concerns, pressure, lack of career guidance, cognitive distortions, social comparisons, and economic/occupational uncertainty. When graduates were asked what their challenge has been after the recession of 2012, the themes of difficulty finding a job/underemployment, financial struggles, and the transition from college to real adult life (Aronson et al., 2015). The same study showed women and first-generation college students had a harder time finding employment after graduation (Aronson et al., 2015). Despite these challenges, graduates during the 2008 recession reported having high expectations around work-life balance, social connections at work, career advancements, ambition, training opportunities, mentoring, and salary (De Hauw & DeVos, 2010).

A study by Ghosh & Fouad (2017) utilized the Career Adapt-Ability Scale and the Multidimensional Scale of Perceived Social Support (MSPSS) to assess 164 graduating seniors from a large public university. It was concluded that as students engage in adaptive behaviors, the need for support decreases, which is ideal for those transitioning to adulthood as independence is established. The sample size was small for this study and did not identify specific support areas needed, however, it was the first to use the MSPSS for this population.

**Mental Health and Anxiety**

According to the American Psychological Association anxiety reported by college students has been increasing since the 1980s (Curran & Hill, 2019). This increase was felt profoundly during the recession. University students reported feeling more anxiety about their job search, job security, and the transition after college (Aronson et al., 2015). In a study

conducted by The Healthy Minds Network and the American College Health Association to better understand the impact of the pandemic on the well-being of college students, 18,764 current students were surveyed across 14 campuses between March and May 2020 (Martinez & Nhuyen, 2020). Of those surveyed, 66% of the participants reported an increase in financial stress and a 15% increase in reported depression compared to fall 2019. Despite the 60% indicating that the pandemic made it more difficult to access mental health care and these lower levels of psychological well-being, there was a higher level of resiliency reported (Martinez & Nhuyen, 2020). College mental health centers are reporting that students are presenting with anxiety about career planning and future careers as early as their freshman year in the U.S. (Beiter et al., 2015). Deer, Gohn, and Kanaya (2017) used an experimental design with a sample of 549 job seekers to examine the impact of anxiety on proactive career development and job search behaviors. They found that those who received positive feedback, even when minimal, experienced lower levels of anxiety which led to higher levels of career self-efficacy and job search intentions. This study demonstrates the importance of mental health interventions targeting anxiety in college students to improve career development and job search behaviors.

According to a study by Curran & Hill (2019), in addition to anxiety, the current generation of college students reports having higher levels of socially prescribed perfectionism than previous generations. Using the Multidimensional Perfectionism Scale, Curran & Hill used samples from students in the United States, Great Britain, and Canada from the past 27 years to examine trends through the years. Even when controlling for gender, which was predominantly female, an increase was demonstrated in self-oriented perfectionism, socially prescribed perfectionism, and other-oriented perfectionism between 1989 and 2016 (Curran & Hill, 2019). This combined with the increased sensitivity to perceived external pressures has shown to make

coping more difficult as well (Curran & Hill, 2019). Despite being the first study examining generational changes in multidimensional perfectionism, the sample may not allow for generalizability of all the population since the respondents were predominantly white and from higher socio-economic backgrounds.

Given what is known about the need to better understand how to prepare emerging adults for uncertain economic times and the importance of mental health, it is essential to study the impact of additional career stressors and times of economic decline to establish best practices to minimize negative career outcomes. By studying the COVID-19 global pandemic and career outcomes during this time more can be learned about how to prepare for the next crisis.

## Summary

There is support in the literature to implement career development courses and HIPs to improve retention and career self-efficacy. However, little has been studied to show the impact of these courses or HIPs on career outcomes including employment and continued education acceptance. Given the increased focus on the need to account for the outcomes of graduates, and the increased demand for higher degrees in the job market, exploring these connections will be essential to identify how adults are learning the needed skills to transition from the university. The unique economic climate faced during the COVID-19 pandemic allows one to view the true impact of these practices on students in both a strong economy and one in crisis.

# Chapter 3

## Methods

This chapter will address the research design of this study including the sample, research questions, instrumentation, and analysis.

## Introduction

This study explored the association between mandatory career development courses and self-reported participation in high-impact practices (HIPs) with first-destination outcomes. The secondary dataset used was compiled through surveys administered by the Office of Academic Insight (OAI) at a large public university in the southeast. To compare the participation in HIPs, completion of mandatory career courses, and first-destination outcomes before and during COVID-19, this study examined responses of undergraduate students who graduated in December 2019 and December 2020. This sample of students was chosen due to their position of graduating seniors at the time of the surveys, which would most accurately represent outcomes. The secondary data utilized had an exceptionally high response rate. An IRB approval was granted to use established data sets collected by the university as part of a graduation course (see Appendix A & B). The research questions in this study were explored using a quantitative research design with the data were analyzed to examine relationships between the variables.

## Sample

This study was conducted at a large (25,000-35,000 students) R1 public university in the southeast. The participants were senior-level students completing the final semester of their undergraduate education and enrolled in a mandatory graduation course at the university in fall 2019 and fall 2020 respectively (N=2550). The university undergraduate population is primarily emerging adults, traditional college-aged students (age 18-24) with 89% of the student

population being full-time enrolled students. According to the demographic information for the university provided by the Office of Institutional Research (OIR) Factbook (2020), 81% of the overall undergraduate student population identified as Caucasian, 5% black, 4% Hispanic, and 2% Asian, with 49% identifying as female and 51% as male. Demographic information involving race, gender, age, GPA, Pell-grant eligibility, and first-generation status were not asked on these surveys used in this study; therefore, a request was made of the OIR to provide this information for the students included in the study using admission data collected by the university to gain a fuller understanding of the sample and explore additional relationships between demographics and first-destination outcomes.

All students were required to complete the First-Destination Survey (FDS) and the Campus Engagement and Experience Survey (CEES) as components of a mandatory non-credit hour online graduation course at the university (See Appendices A and B). Since the surveys were administered prior to graduation, a multi-faceted approach of follow-up data collection using phone calls, LinkedIn profile data, and the National Students Transcript Clearinghouse (NSTC) data were used to update employment statuses and continued education acceptance to represent student outcomes most accurately within six months of graduation. The response rate for the FDS was reported at 99% of the graduating students having completed the surveys.

## Instrumentation

The First-Destination Survey (FDS) and the Campus Engagement and Experiences Survey (CEES), administered by the Office of Academic Insight (OAI), were used to compile the data for this study. Using the standards and protocols outlined by NACE (2019) for reporting and best practices, the FDS was created and administered as an assignment in the mandatory online course using a Qualtrics™ survey. Instead of validity or reliability measures, the FDS survey is

evaluated by knowledge rate which NACE (2019) defines as “reasonable and verifiable information concerning the graduates’ postgraduation career activities,” (p.5) and has a minimum knowledge rate of 65% of first destination outcomes. The FDS used for this study reported a knowledge rate of 99% of those earning an undergraduate degree during the two time periods represented in this study, December 2019 and December 2020. The FDS included questions about intended plans for after graduation, if a job or educational program offer had been made or accepted, or if still looking or applying. In addition, the survey is linked to the student management platform, Banner™, to automatically connect the student responses to their personal information including college and major. Options for plans include full-time or part-time employment, military career opportunities, continued education, volunteerism, and other. The category of other was included to account for plans not represented in the option choices and allowed for text entry to detail the plans as is best practice for surveys. For each option, students are asked to select if a position has been secured, still applying, not looking, or if any offers have been received (Appendix A). Students were asked between 10-23 questions on this survey depending on their responses and display logic. Definitions for each of the options are given within the assessment and NACE (2019) wording is used to ensure consistency to allow compilation with other institutions for compilation into a national publication for NACE published annually.

The CEES survey included questions for all university students as well as supplemental questions from specific colleges (Appendix B). The university-wide questions related to involvement in high-impact practices (HIPs) were compiled by a committee of representatives from different units on the campus. HIPs have been outlined as first-year seminars and experiences, common intellectual experiences (core curriculum), learning communities, writing-

intensive courses, collaborative assignments and projects, diversity/global learning (study abroad), service learning, internships, undergraduate research, capstone courses/projects, and ePortfolio (Kuh, 2008). To keep the survey brief and best align with the strategic plan for the university, the options for response were narrowed by OAI for the CEES to five choices: internships, cooperative education (co-op), study abroad, undergraduate research, and ePortfolio. In addition to identifying HIPs experienced during college, students were asked to detail how many of each HIP, how they found the opportunity, if it was a requirement for their major, when and where these practices were completed, and to describe the impact of these experiences. For specific experiences such as undergraduate research, internships, and co-ops, additional questions were asked to determine the results of these efforts, including publications or job offers made. Student employment status and hours per week worked were included in the survey and added as a HIP for this study due to the experiential learning components of the experience. The supplemental college-specific questions were not uniform across the university and included a variety of topics including gauging career readiness, resources utilized, self-efficacy, impact of faculty and/or advisors, and demonstration of ability to convey the value of their education. Because the college-specific questions were not asked of all graduating students, these data points were left out of the analysis for this study. Using display logic, students only viewed questions required by the college in which their major was housed. The CEES was also administered in the mandatory online course as an assignment linked to a Qualtrics™ survey. Due to the alignment with the FDS, the CEES survey also operated with a 99% knowledge rate as a measurement that far exceeds the minimum knowledge rate required by NACE of 65%.

To account for mandatory career development courses required only in specific curricula, a request was made to the Office of the Registrar (OR) to supply a list of mandatory career

courses and the colleges where these classes were embedded into the curriculum for all students. The request was granted, and the data file was mapped to include this data in binary form to allow logic regressions to be run. Although a variety of elective career development courses were offered by the university, only mandatory career development courses were examined in this study. This distinction was made to minimize the impact of self-selection in the outcomes since those who choose to take an elective course may be more likely to seek assistance in their career exploration compared to the general student body.

## Data Collection

Students took the FDS as part of a university graduation course and completion of the assessment was required for graduation to maximize the response rate. As the assessments were conducted before the student graduated, and since plans change, additional emails were sent by OAI to the same students both three and six months after graduation requesting follow-up data. The three and six-month follow-up process is aligned with NACE standards for reporting and best practices for collecting data (NACE, 2019). Those who did not reply with an updated FDS, or those who responded that they were “still looking” for a job or “still applying” to graduate school (n= ~200), were called by telephone directly by three trained student staff members of the University Career Center. The follow-up calls were scripted as is best practice for consistency and used to clarify the plans of the graduate. If needed, additional assistance from career counselors was offered to those still seeking employment or educational program acceptance. Those who did not answer or respond to the phone call campaign were searched for using LinkedIn and updated based on their profiles as outlined by NACE as a reasonable practice when done in “good faith” for knowledge rate (2019). The OAI requested a report of students who have enrolled in additional education programs from the National Student Transcript

Clearinghouse (NSTC) which collects enrollment data from universities across the country. The NSTC is a private organization used by many university systems to safely send accurate official university transcripts for students. As a partner institution, the NSTC reports educational enrollment back to the university annually. This report was then combined with the FDS data to account for accurate enrollment statistics for continued education. For this study, a formal request was made to the OAI and OIR to access the data and IRB approved the use.

The CEES was administered as part of the same graduation course as well and distributed electronically via Qualtrics™ and required for course completion and graduation. This survey took approximately 15 minutes to complete. Because these HIPs and additional experiences discussed in the CEES would have already been completed by the student at the time of the survey, there was no need for additional follow-up with the students.

A list of required career development-focused courses was requested from the OR and linked to the specific colleges in the data file. The request for this information was granted, and it was determined that a mandatory career development course was part of the curriculum of the College of Business and the College of Liberal Arts but no other colleges.

Demographic information was not asked on any of the surveys sent to students. To allow for the variables of age, race, first-generation status, Pell-grant eligibility, and GPA to be explored in relation to outcomes, a request for the demographic information of these graduates compiled from official student records was requested and granted by the OIR and mapped to the students in the data file for further analysis.

## Data Analysis

The following research questions were used in this study:

1. Is there a difference in first-destination outcomes for students graduating just prior to the start of COVID-19 global pandemic and students graduating during?
2. Is there a difference between high-impact practice participation by students graduating just prior to the start of COVID-19 global pandemic and students graduating during?
3. Does enrollment in a mandatory career development course add value above and beyond high-impact practices when predicting first-destination outcomes?
4. Does enrollment in a mandatory career development course add value above and beyond high-impact practices when predicting first-destination outcomes during the COVID-19 global pandemic?

All data was matched by student number and compiled into one CSV file per graduating class and then stored on Box™, which meets all university and FERPA security standards. Identifiable student information was removed following all guidelines for confidentiality, and student numbers were uniformly adjusted to be used to differentiate the subjects by OIA before access was granted to the researcher. The two CSV files were imported into SPSS™ for separate analysis.

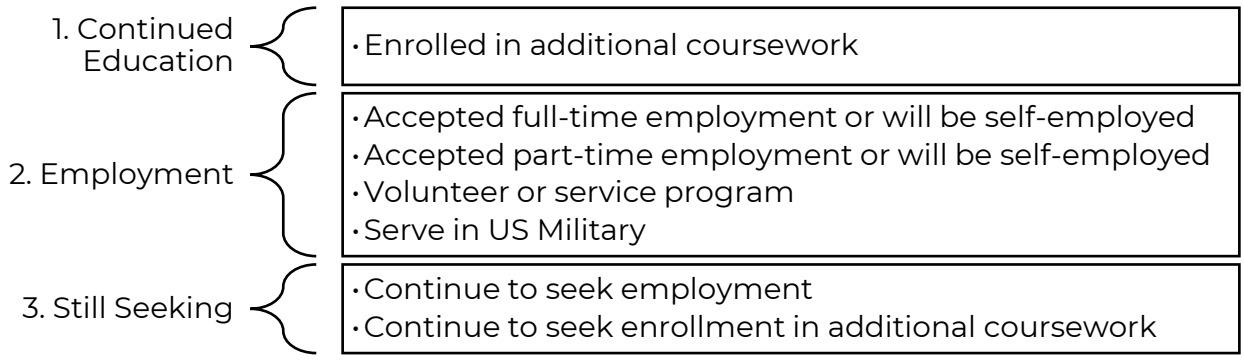
1. Is there a difference in first-destination outcomes for students graduating just prior to the start of COVID-19 global pandemic and students graduating during?

if there was a difference in rates of each of the first-destination outcomes before and during the COVID-19 pandemic. This statistical test was chosen to compare the frequencies of the categorical dependent variable, first-destination outcomes, and the independent categorical and binary variable of the graduation cohort. On the original FDS survey, there were 10 possible responses to the question of outcomes (Appendix A). To streamline this category and most accurately gauge what was being examined, the responses of full-time job offer received, offer

received, part-time employment, Military, volunteer, and other were combined for this evaluation with the single descriptor of "employment" since they all can be seen as intentional employment endeavors. Those who selected "still looking" for a job or "still applying" for additional coursework were combined into the category of "still seeking." Those who selected "not seeking" were removed from the dataset due to the ambiguity of either enrolled in additional coursework, employment, or still seeking. This left three potential categories for first-destination outcomes: (1) continued education acceptance; (2) employment; (3) still seeking. Because actual outcomes often differ from intended outcomes, the intended outcomes were not examined for this study. For instance, students who originally plan to continue their education may decide to pursue a full-time job instead. This would result in a positive outcome, employment, but not if compared to their original intent, continued education acceptance.

**Figure 4**

*First-Destination Outcomes: Categorical and Three Levels*




Since the CEES survey was not implemented until December 2019 and COVID-19 did not start impacting higher education or the economy until March 2020, the student data for this question was limited to comparing only students who graduated in December 2019 to December

2020 graduates. Graduates in December 2019 may have seen some impact due to the pandemic in their three- or six-month follow-up but unlikely in their initial self-report.

2. Is there a difference between high-impact practice participation by students graduating just prior to the start of COVID-19 global pandemic and students graduating during?

For the second question, a Pearson chi-square between subjects was used to determine if there was a difference in engagement in 1 or more HIP between students who graduated in December 2019 compared to 2020. Once established additional Pearson chi-squares were run for each of the HIPs completed by students before vs during the COVID-19 pandemic. This allowed for the comparison between the frequencies of the categorical and binary independent variable of specific HIP experienced compared between the binary and categorical cohort dependent variables. For consistency and COVID-19 involvement, only December 2019 graduates and December 2020 graduates were examined.

**Figure 5**

*High-Impact Practice: Categorical and Binary for Analysis*

| High-Impact Practices |
| --- |
| Categorical and binary |
| ≥ 1 High-Impact Practice:<br>1: did not select "none"<br>2: selected "none" |
| Each High-Impact Practice:<br>1: indicated completion<br>2: did not select |

3. Does enrollment in a mandatory career development course add value above and beyond high-impact practices when predicting first-destination outcomes?

4. Does enrollment in a mandatory career development course add value above and beyond high-impact practices when predicting first-destination outcomes during the COVID-19 global pandemic?

To answer questions three and four, demographic data were examined using a Pearson chi-square to determine if significant differences were found concerning first-destination outcomes based on gender, age, race, GPA, Pell-grant eligibility, or first-generation status. Once identified, the demographics that yielded significant differences in first-destination outcomes were controlled for using a multinomial logic regression to measure the true impacts of HIPs and first-destination outcomes. Also, the two cohort samples were compared in a Pearson chi-square to determine if significant differences existed between the samples.

To establish if there is a connection between mandatory career development courses in the curriculum and positive graduation outcomes, a Pearson chi-square was run in SPSS™. The independent variable of the presence of a career development course in the curriculum was binary as was the dependent variable of positive graduation outcomes which included continued education acceptance, employment, still seeking. A Pearson chi-square was also run to determine if there was a connection between the HIP and positive graduation outcomes. The independent variable No HIP was binary as was the dependent variable of positive graduation outcomes.

Once relationships were shown to exist in both analyses, a multinomial logic regression was run to explore the relationship between mandatory career courses on positive graduation outcomes while controlling for HIPs and significant demographics. The dependent variable of positive graduation outcomes stayed the same and categorical with three levels, as did the independent categorical and binary presence of career development courses in the curriculum. However, the independent variable of the HIP was categorical during this test to determine the

impact of the five specific types of HIPs experienced compared to the absence of HIP. The HIP examined were co-op, ePortfolio, internship, undergraduate research, study abroad, working while enrolled at the University, and no HIP. The demographic of age was controlled for in question three because significant differences in first-destination outcomes were found among the December 2019 cohort. Controlling for this variable in the logic regression was necessary to more accurately measure the likelihood of first-destination outcomes based on HIP participation without this as a confounding variable. This variable was dichotomous with traditional college-aged students (< 24 years old) being compared to non-traditional college-aged students (≥ 24 years old). To answer question four, the demographics of age, gender, race, first-generation status, and GPA. Age remained dichotomous traditional college-aged students being measured against non-traditional. Gender was dichotomous with females being compared to males as the reference group. First-generation status was also dichotomous with non-first-generation being the reference group. Race was categorical with eight options with the reference group being white monoracial students. GPA was divided into five ranges to be categorical beginning with < 2.09 and the reference group of 3.6 - 4.0 on a 4.0 scale.

Subsequently, multiple multinomial logic regressions were used to examine if mandatory career courses added value above and beyond each HIP for each graduating cohort. The dependent variable of first-destination outcome and the independent variables, or factor, of a mandatory career development course in the curriculum. The demographics were controlled for in this analysis as well and remained constant covariants. However, each HIP was added separately binary categorical independent variables for each multinomial logic regression run to determine if there was an added value of mandatory career courses to the different HIP

experienced. The presence of a course remained dichotomous and binary, and each HIP was also categorical and binary to account for multiple HIP experienced.

## Summary

Using the data compiled by the First-Destination Survey (FDS) and the Campus Engagement and Experiences Survey (CEES) administered in fall 2019 and fall 2020 to examine the graduating cohorts of December 2019 and December 2020, relationships were explored between first-destination outcomes and mandatory career courses, as well as the impact of COVID-19 on these students in terms of outcomes and high-impact practices. These established data sets report a 99% completion rate by the graduating seniors at a large-sized public R-1 university in the southeast. Using SPSS™ to run Pearson chi-squares and multinomial logic regressions, the relationships were explored and will be analyzed and discussed in Chapter 4.

# Chapter 4

## Findings

The purpose of this quantitative study was to explore the association between mandatory career development courses and participation in high-impact practices with graduation outcomes and if there were any impacts due to COVID-19 This chapter provides a summary of the results related to each of the research questions below:

1. Is there a difference in first-destination outcomes for students graduating just prior to the start of COVID-19 global pandemic and students graduating during?
2. Is there a difference between high-impact practice participation by students graduating just prior to the start of COVID-19 global pandemic and students graduating during?
3. Does enrollment in a mandatory career development course add value above and beyond high-impact practices when predicting first-destination outcomes?
4. Does enrollment in a mandatory career development course add value above and beyond high-impact practices when predicting first-destination outcomes during the COVID-19 global pandemic?

## Demographics

Participants in the study were all 2,550 graduating seniors completing their final semester at a large-sized R1 public university in the southeast during falls 2019 and 2020. Demographic information was not asked in the First-Destination Survey (FDS) or the College Experience and Engagement Survey (CEES) but was compiled by the Office of Academic Insight prior to coding or review using enrollment data. In total, 2,550 participants were included in this study consisting of two distinct cohorts who graduated just before the pandemic hit, in December 2019 (n = 1,213) and mid-pandemic, in December 2020 (n = 1,337). Females made up 44.7% of the

total population (2019: n = 528; 2020: n = 611) and males 55% (2019: n = 677; 2020: n = 726). These samples were representative of the university with the majority consisting of traditional college-age students under the age of 24 (2019: n = 1084; 2020: n = 1237). The largest racial identifies included 72% white (2019: n = 844; 2020: n = 991), 11.7% non-resident alien (2019: n = 79; 2020: n = 157), 6.3% black or African American (2019: n = 87; 2020: n = 74). Among the participants, 15.3% identified as first-generation college students (2019: n = 186; 2020: n = 205) and 15.8% were Pell-grant eligible (2019: n = 171; 2020: n = 232). The largest percentage of graduates in both cohorts had a cumulative GPA between 2.6-3.09 on a 4.0 scale comprising 28.5% of the sample (2019: n = 370; 2020: n = 358). The largest colleges represented were College of Business 24.6% (2019: n = 300; 2020: n = 327), College of Engineering 19.6% (2019: n = 238; 2020: n = 262), and College of Liberal Arts 17.7% (2019: n = 219; 2020: n = 232). All participant demographics can be seen in Table 1.

**Table 1**

*Demographics of Participants*

| | December 2019 Cohort | | December 2020 Cohort | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| Sample Size | 1213 | 100% | 1337 | 100% | 2550 | 100% |
| | Age | | | | | |
| Traditional Aged (ages 18-24) | 1084 | 83.3% | 1237 | 92.5% | 2321 | 91% |
| Non-traditional Aged (above 25) | 146 | 11.2% | 100 | 7.5% | 246 | 9.6% |
| Unknown | 64 | 4.9% | - | - | 64 | .3% |
| | **Gender** | | | | | |
| Female | 528 | 43.5% | 611 | 45.7% | 1139 | 44.7% |
| Males | 677 | 55.8% | 726 | 54.3% | 1403 | 55% |
| | Race | | | | | |
| American Indian | 5 | .4% | 4 | .3% | 9 | .04% |
| Asian | 28 | 2.3% | 37 | 2.8% | 65 | 2.5% |

| | December 2019 Cohort | | December 2020 Cohort | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| Black or African-American | 87 | 7.2% | 74 | 5.5% | 161 | 6.3% |
| Hispanic | 30 | 2.5% | 47 | 3.5% | 77 | 3% |
| Native Hawaiian/ Pacific Islander | 1 | .1% | 1 | .1% | 2 | .1% |
| Non-resident alien | 79 | 6.5% | 157 | 11.7% | 236 | 9.3% |
| Two or More Races | 22 | 1.7% | 25 | 1.9% | 47 | 1.8% |
| Unknown | 9 | .7% | - | - | 9 | .4% |
| White | 844 | 77.8% | 991 | 74.1% | 1835 | 72% |
| **First-generation Status** | | | | | | |
| Yes | 186 | 15.3% | 205 | 15.3% | 391 | 15.3% |
| No | 836 | 68.9% | 898 | 67.2% | 1734 | 68% |
| Unknown | 186 | 15.3% | 234 | 17.5% | 420 | 16.5% |
| **Pell-grant Eligible** | | | | | | |
| Yes | 171 | 14.1% | 232 | 17.4% | 403 | 15.8% |
| No | 973 | 80.2% | 388 | 29% | 1325 | 52% |
| Non-filer/Unknown | 61 | 5% | 717 | 53.6% | 778 | 30.5% |
| **Cumulative GPA** | | | | | | |
| 3.6-4.0 | 230 | 19.1% | 284 | 21.2% | 514 | 20.2% |
| 3.1-3.59 | 337 | 28.0% | 366 | 27.4% | 703 | 27.6% |
| 2.6-3.09 | 370 | 30.7% | 358 | 26.8% | 728 | 28.5% |
| 2.1-2.59 | 216 | 17.9% | 265 | 19.8% | 481 | 18.9% |
| <2.09 | 52 | 4.3% | 64 | 4.4% | 116 | 4.5% |
| **College of Enrollment** | | | | | | |
| College of Agriculture | 85 | 7% | 78 | 5.8% | 163 | 6.4% |
| College of Architecture, Design, and Construction | 93 | 7.7% | 78 | 5.8% | 171 | 6.7% |
| College of Education | 105 | 8.7% | 120 | 9% | 225 | 8.8% |
| College of Human Sciences | 59 | 4.9% | 60 | 4.5% | 119 | 4.7% |
| College of Liberal Arts | 219 | 18.1% | 232 | 17.4% | 451 | 17.7% |
| College of Sciences and Mathematics | 81 | 6.7% | 145 | 10.8% | 226 | 8.9% |
| College of Business | 300 | 24.7% | 327 | 24.5% | 627 | 24.6% |
| College of Engineering | 238 | 19.6% | 262 | 19.6% | 500 | 19.6% |
| School of Forestry and Wildlife Sciences | 20 | 1.6% | 24 | 1.8% | 44 | 1.7% |
| School of Nursing | 5 | .4% | 8 | .6% | 13 | .5% |

| | December 2019 Cohort | | December 2020 Cohort | | Total | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| Other | 8 | .7% | 3 | .2% | 11 | .4% |

*Note. Total N=2,550*

First-Destination outcomes included 16.9% of the total graduates were accepted to continued education (2019: n = 211; 2020: n = 222), 51.1% were employed (2019: n = 646; 2020: n = 660), and 31.5% still seeking employment or continued education six months after graduation (2019: n = 348; 2020: n = 455). Of the respondents, 42% had completed a mandatory career course as part of their curriculum (2019: n = 519; 2020: n = 559). The most common HIPs completed were working while enrolled at the University with 64.7% (2019: n = 794; 2020: n = 855) and completing internships with 46.9% (2019: n = 615; 2020: n = 581). 31.7% of the total sample (2019: n = 306; 2020: n = 502) reported not having completed a HIP of any kind. These frequencies can be found in Table 2.

**Table 2**

*Frequencies of Outcomes, Career Course Taken, and High Impact Practice Participation*

| | December 2019 cohort | | December 2020 cohort | | Total | |
|---|---|---|---|---|---|---|
| | n | % | N | % | n | % |
| First-destination outcomes | | | | | | |
| Continued education acceptance | 211 | 17.4% | 222 | 16.6% | 432 | 16.9% |
| Employment | 646 | 53.6% | 660 | 49.4% | 1302 | 51.1% |
| Still seeking | 348 | 28.7% | 455 | 34.0% | 802 | 31.5% |
| Career Course Required | | | | | | |
| Yes | 519 | 42.8% | 559 | 41.8% | 1078 | 42.3% |
| No | 686 | 56.6% | 778 | 58.2% | 1464 | 57.4% |
| High-impact practice completion | | | | | | |
| Cooperative education (co-op) | 93 | 7.7% | 97 | 7.3% | 192 | 7.5% |

| | December 2019 cohort | | December 2020 cohort | | Total | |
|---|---|---|---|---|---|---|
| | n | % | N | % | n | % |
| Internship | 615 | 50.7% | 581 | 43.5% | 1196 | 46.9% |
| Undergraduate research | 188 | 15.5% | 220 | 16.5% | 408 | 16% |
| Study abroad | 170 | 14.0% | 143 | 10.7% | 313 | 12.3% |
| ePortfolio | 184 | 14.1% | 167 | 12.5% | 351 | 13.8% |
| Working while enrolled | 794 | 65.5% | 855 | 63.9% | 1649 | 64.7% |
| None | 306 | 25.4% | 502 | 37.5% | 808 | 31.7% |
| Hours per Week Worked while Enrolled | | | | | | |
| < 5 | 35 | 2.9% | 31 | 2.3% | 66 | 2.6% |
| 5-10 | 108 | 9.0% | 112 | 8.4% | 220 | 8.6% |
| 10-15 | 140 | 11.7% | 190 | 14.2% | 330 | 12.9% |
| 15-20 | 224 | 18.7% | 209 | 15.6% | 433 | 17% |
| 20-25 | 128 | 10.7% | 136 | 10.2% | 264 | 10.4% |
| > 25 | 147 | 12.2% | 177 | 13.2% | 324 | 12.7% |

*Note. Total N=2,550 (2019 n= 1,213; 2020 n=1,337).*

## Discussion of Findings

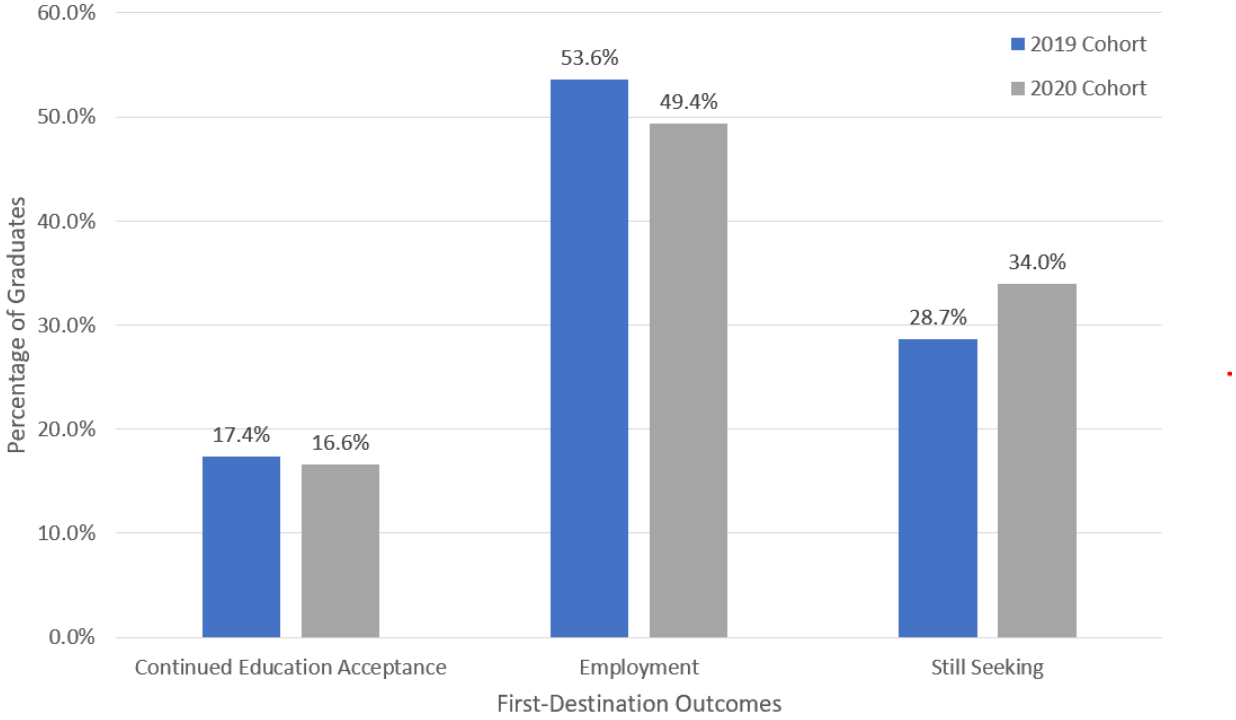
Research Question 1: Is there a difference in first-destination outcomes for students graduating just prior to the start of COVID-19 global pandemic and students graduating during?

To compare the first-destination outcomes between students who graduated before the COVID-19 pandemic (December 2019) and during (December 2020), a Pearson chi-square was run with the cohort year as the independent variable and the dependent variable being the three levels of first-destination outcomes. The results were significant $\chi^2(2) = 7.854$, $p = .020$ with a greater percentage of graduates from December 2020 still seeking six months after graduation and a higher percentage of the 2019 graduates employed. Results can be seen in Figure 4.

Since significant differences were found between the outcomes of the two cohorts, a rejection of the null hypothesis was determined.

**Figure 6**

*First-Destination Outcomes for Each Graduation Cohort*




*Note: Total N=2,550 (2019 n= 1,213; 2020 n=1,337).*

Additional demographics were examined to ascertain if any significant differences were observed concerning first-destination outcomes. For the 2019 cohort, no significant differences were shown for gender, race, first-generation status, GPA, or Pell-grant eligibility. However, significant differences were observed based on age with traditional (18-24 years of age) versus non-traditional (≥ 24 years of age) aged graduates having a significant difference in first-destination outcomes ($\chi^2(2) = 11.796$, $p = .003$) as seen in Table 3. Non-traditional-aged students who graduated before the COVID-19 global pandemic were significantly more likely to be employed within six months of graduation and less likely to be still seeking in comparison to their traditional-aged peers.

For the December 2020 cohort, significant differences were observed based on age ($\chi^2(2) = 9.738$, $p = .008$), gender ($\chi^2(2) = 21.384$, $p < .001$), race ($\chi^2(16) = 87.199$, $p < .001$), first-generation status ($\chi^2(2) = 45.025$, $p < .001$), and GPA ($\chi^2(8) = 68.739$, $p < .001$) as seen in Table 3. Interestingly, despite being less likely to be still seeking employment or admission six months after graduation in the cohort graduating in 2019, the non-traditional aged graduates were significantly more likely to be still seeking during the COVID-19 pandemic (2019: 2.1%; 2020: 3.5%). To determine if the likelihood of these discrepancies occurred by chance, the Z test of standardized residuals was used. Significantly more females (9.9%) compared to males (6.7%) were enrolled in continued education in the December 2020 cohort (standard residual = 3.0). Interestingly the percentage of females continuing their education increased for the 2020 cohort compared to the 2019 graduates from 7.1% to 9.9% but decreased for males from 10.3% to 6.7%. Also, non-resident alien (standard residual = -5.1) and Asian graduates from .5% to 1.4% of the total cohort (standard residual = -1.5) experienced the greatest decreases in employment for the 2020 graduates compared to those who identified as white (standard residual = 2.5). No significant differences were observed based on Pell-grant eligibility ($\chi^2(2) = 2.541$, $p = .281$).

**Table 3**

*First-Destination Outcomes based on Demographics*

| | **December 2019 Cohort** | | | | | | **December 2020 Cohort** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cont. Edu. | | Employed | | Seeking | | Cont. Edu. | | Employed | | Seeking | |
| | n | % | n | % | n | % | n | % | n | % | n | % |
| | | | | | | **Age** | | | | | | |
| | $\chi^2(2) = 11.796$, $p = .003$** | | | | | | $\chi^2(2) = 9.738$, $p = .008$** | | | | | |
| Traditional (ages 18-24) | 187 | 15.4% | 552 | 45.5% | 323 | 26.6% | 213 | 15.9% | 616 | 46.1% | 408 | 30.5% |
| Non-traditional (above 25) | 24 | 19.5% | 94 | 7.7% | 25 | 2.1% | 9 | .7% | 44 | 3.3% | 47 | 3.5% |
| | | | | | | **Gender** | | | | | | |

| | December 2019 Cohort | | | | | | December 2020 Cohort | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cont. Edu. | | Employed | | Seeking | | Cont. Edu. | | Employed | | Seeking | |
| | n | % | n | % | n | % | n | % | n | % | n | % |
| | $\chi^2(2) = 1.468$, $p = .48$ | | | | | | $\chi^2(2) = .21.384$, $p < .001$ | | | | | |
| Female | 86 | 7.1% | 282 | 23.2% | 160 | 13.2% | 132 | 9.9% | 292 | 21.8% | 187 | 14% |
| Males | 125 | 10.3% | 364 | 30% | 188 | 15.5% | 90 | 6.7% | 368 | 27.5% | 268 | 20% |
| **Race** | | | | | | | | | | | | |
| | $\chi^2(16) = 3.791$, $p = .435$ | | | | | | $\chi^2(16) = 87.199$, $p < .001$ | | | | | |
| American Indian | 1 | .1% | 2 | .2% | 2 | .2% | 0 | 0% | 1 | .01% | 3 | .2% |
| Asian | 6 | .5% | 16 | 1.3% | 6 | .5% | 6 | .4% | 12 | .9% | 19 | 1.4% |
| Black or African-American | 15 | 1.2% | 40 | 3.3% | 32 | 2.6% | 9 | .7% | 31 | 2.3% | 34 | 2.5% |
| Hispanic | 4 | .3% | 16 | 1.3% | 10 | .8% | 5 | .4% | 28 | 2.1% | 14 | 1% |
| Native Hawaiian/ Pacific Islander | 0 | 0% | 1 | .1% | 0 | 0% | 1 | .01% | 0 | 0% | 0 | 0% |
| Non-resident alien | 15 | 1.2% | 46 | 3.8% | 18 | 1.5% | 38 | 2.8% | 33 | 2.5% | 86 | 6.4% |
| Two or more races | 4 | .3% | 15 | 1.2% | 3 | .2% | 4 | .3% | 10 | .7% | 11 | .8% |
| White | 166 | 13.7% | 504 | 41.5% | 274 | 22.6% | 159 | 11.9% | 544 | 40.7% | 288 | 21.5% |
| **First-Generation Status** | | | | | | | | | | | | |
| | $\chi^2(4) = 3.791$, $p = .435$ | | | | | | $\chi^2(2) = 45.025$, $p < .001$ | | | | | |
| Yes | 25 | 2.1% | 91 | 7.5% | 51 | 4.2% | 25 | 1.9% | 113 | 10% | 67 | 5% |
| No | 184 | 15.2% | 552 | 45.5% | 297 | 24.5% | 152 | 11.4% | 475 | 35.5% | 271 | 20.3% |
| Unknown | 2 | .2% | 3 | .2% | 0 | 0% | | | | | | |
| **Pell-Grant Eligible** | | | | | | | | | | | | |
| | $\chi^2(4) = 4.547$, $p = .337$ | | | | | | $\chi^2(4) = 2.541$, $p = .281$ | | | | | |
| Yes | 28 | 2.3% | 102 | 8.4% | 53 | 4.4% | 31 | 2.3% | 115 | 8.6% | 86 | 6.4% |
| No | 155 | 12.8% | 439 | 36.2% | 242 | 20% | 191 | 14.3% | 545 | 40.8% | 369 | 27.6% |
| Non-filer/ Unknown | 28 | 2.3% | 105 | 8.7% | 53 | 4.4% | | | | | | |
| **Cumulative GPA** | | | | | | | | | | | | |
| | $\chi^2(8) = 13.421$, $p = .098$ | | | | | | $\chi^2(8) = 68.739$, $p < .001$ | | | | | |
| 3.6 - 4.0 | 43 | 3.5% | 133 | 11% | 54 | 4.5% | 81 | 6.1% | 133 | 10% | 70 | 5.2% |
| 3.1 - 3.59 | 51 | 4.2% | 188 | 15.5% | 98 | 8.1% | 61 | 4.6% | 196 | 14.7% | 109 | 8.2% |
| 2.6 - 3.09 | 75 | 6.2% | 176 | 14.5% | 119 | 9.8% | 60 | 4.5% | 162 | 12.1% | 136 | 10.2% |

| | December 2019 Cohort | | | | | | December 2020 Cohort | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cont. Edu. | | Employed | | Seeking | | Cont. Edu. | | Employed | | Seeking | |
| | n | % | n | % | n | % | n | % | n | % | n | % |
| 2.1 - 2.59 | 33 | 2.7% | 125 | 10.3% | 58 | 4.8% | 18 | 1.3% | 132 | 9.9% | 115 | 8.6% |
| < 2.09 | 9 | .7% | 24 | 2% | 19 | 1.6% | 2 | .1% | 37 | 2.8% | 25 | 1.9% |

*Note. Total N=2,550 (2019 n= 1213; 2020 n=1337).*

Research Question 2: Is there a difference between high-impact practice participation by students graduating just prior to the start of COVID-19 global pandemic and students graduating during?

To compare differences in completion of HIPs between the graduation cohorts, a Pearson chi-square was run first. A significant difference was found between the cohorts among those who completed one or more HIP with $\chi^2(1) = 39.468$, $p < .001$, making the difference unlikely due to chance and resulting in a rejection of the null hypothesis.

To determine the differences for each category of HIP, a Pearson chi-square was run for the two cohorts and each HIP option separately. There were no significant differences found between the two cohorts for co-ops ($\chi^2(1) = 1.052$, $p = .305$), ePortfolios ($\chi^2(1) = 2.312$, $p = .128$), undergraduate research ($\chi^2(1) = .034$, $p = .853$), or working while enrolled at the University ($\chi^2(1) = .440$, $p = .507$). However, internships ($\chi^2(1) = 15.056$, $p < .001$) and study abroad experiences ($\chi^2(1) = 8.696$, $p = .003$) differed significantly with more students completing them in the 2019 graduation cohort versus 2020. Those who completed internships went from 50.9% for the 2019 cohort to 43.3% for the 2020 cohort. The total percentage of individuals who studied abroad in the 2019 cohort was 14.3% but only 10.5% in the 2020 cohort. Table 4 shows involvement in all HIPs and the chi-square value for each. Figure 5 displays the three HIP categories with significant differences between cohorts to further demonstrate the levels of discrepancies.

**Table 4**

*Completion of High Impact Practices and Significance of Differences*

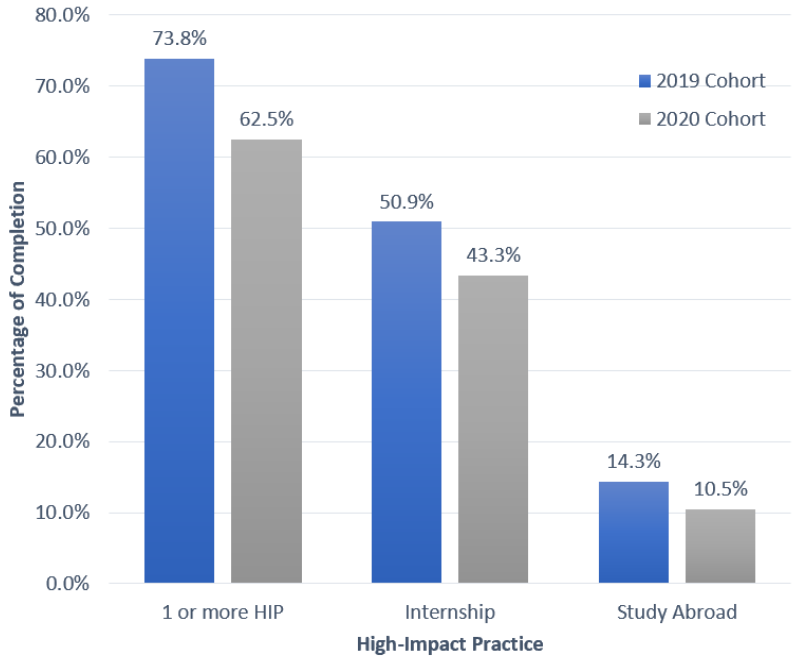
| HIP Completion | 2019 | | 2020 | | | |
|---|---|---|---|---|---|---|
| | Yes | % | Yes | % | Chi-square | *p* |
| ≥1 HIP [a] | 895 | 73.8% | 835 | 62.5% | 39.468 | <.001 |
| Co-op [a] | 97 | 8% | 93 | 7% | 1.052 | .305 |
| ePortfolio [a] | 172 | 14.2% | 163 | 12.2% | 2.312 | .128 |
| Internship [a] | 617 | 50.9% | 579 | 43.3% | 15.056 | <.001 |
| Study abroad [a] | 173 | 14.3% | 140 | 10.5% | 8.696 | .003 |
| Undergraduate research [a] | 192 | 15.8% | 216 | 16.2% | .034 | .853 |
| Worked while enrolled [a] | 780 | 64% | 846 | 63.3% | .440 | .507 |

*Note. Total N=2,550 (2019 n= 1,213; 2020 n=1,337), df=1.*

[a]1= yes, 2= no.

**Figure 7**

*Significant Differences in High-Impact Practice Completion*




*Note Total N=2, 0550 (2019 n= 1,213; 2020 n=1,337).*

Research Question 3: Does enrollment in a mandatory career development course add value above and beyond high-impact practices when predicting first-destination outcomes?

To answer this question, relationships between first-destination outcomes and mandatory career courses or HIPs must first be established. Because significant differences in first-destination outcomes were already established between the December 2019 and December 2020 graduation cohorts, a Pearson chi-square was run to determine if there was also a significant difference in the completion of mandatory career courses between the two cohorts. No significant differences were found to exist between the number of students who completed a mandatory career course among graduates in December 2019 versus December 2020 ($\chi^2(1) = 1.668$, $p = .197$).

Since significant differences were found in first-destination outcomes but not course completion between the two groups, the data remained separate for analysis, and only the December 2019 data was used for this question due to this period being more representative of an average economic climate.

A Pearson chi-square was run to determine if first-destination outcomes differed among those who completed one or more HIP compared to those who completed no HIPs. No significant differences were found in fist-destination outcomes for those who completed one or more HIPs compared to those who did not ($\chi^2(2) = 2.276$, $p = .320$). To examine specific HIPs, additional Pearson chi-squares were run. As shown in Table 5, significant differences were shown among those who completed co-op ($\chi^2(2) = 28.194$, $p < .001$), internships ($\chi^2(2) = 18.824$, $p < .001$), study abroad ($\chi^2(2) = 20.715$, $p < .001$), and undergraduate research ($\chi^2(2) = 6.155$, $p = .046$) which were unlikely due to chance and are shown in Table 5. Two categories showed no

significant differences in first-destination outcomes for 2019, ePortfolios with $\chi^2(2) = .4.181$, p = .124 and working while enrolled in the University $\chi^2(2) = .984$, p = .611.

Since the 2019 cohort showed a significant difference in first-destination outcomes based on age range, a Multinomial logic regression was run to observe the impact of HIP participation while controlling for age. The results showed a significant positive relationship with employment for those who completed one or more HIP compared to those who did not (B = .883, p < .001). This means the odds of securing employment were 2.4 times more likely as students engaged in more HIPs compared to those who completed none. For continued education acceptance, the results showed a negative but not significant impact among those who completed one or more HIP (B = -.306, p = .092) compared to those who did not complete a HIP as shown in Table 6.

**Table 5**

*First-Destination Outcomes based on Hight-Impact Practice Completion (December 2019 Graduates)*

| **HIP Completion** | **Continued Education Acceptance** | | | **Employment** | | | **Still Seeking** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | n | % | SR | n | % | SR | n | % | SR | $\chi^2$ | *p* |
| ≥1 HIP | 151 | 12.4% | -.5 | 491 | 40.5% | .5 | 253 | 20.9% | -.3 | 2.276 | .320 |
| Co-op | 8 | .7% | -2.2 | 77 | 6.3% | 3.5 | 12 | 1% | -3.0 | 28.194 | < .001 |
| ePortfolio | 38 | 3.1% | 1.4 | 93 | 7.7% | .1 | 41 | 3.4% | -1.2 | 4.181 | .124 |
| Internship | 114 | 9.4% | .6 | 295 | 24.3% | -2.0 | 208 | 17.1% | 2.2 | 18.824 | < .001 |
| Study abroad | 23 | 1.9% | -1.3 | 120 | 9.9% | 2.8 | 30 | 2.5% | -2.8 | 20.715 | < .001 |
| Undergraduate research | 44 | 3.6% | 1.8 | 103 | 8.5% | .0 | 45 | 3.7% | -1.4 | 6.155 | .046 |
| Working while enrolled | 131 | 10.8% | -.5 | 425 | 35% | .3 | 224 | 18.5% | -.1 | .984 | .611 |

*Note. n= 1,213. SR* = standard residual.

**Table 6**

*The Likelihood of Positive First-Destination Outcomes based on Completing One or More High-Impact Practice while Controlling for Age (December 2019 Graduates)*

| | | | | 95% CI | | |
|---|---|---|---|---|---|---|
| | B | *SE* | *Est(B)* | *LL* | *UL* | *P* |
| Continued education acceptance | | | | | | |
| Age | .531 | .301 | 1.701 | .943 | 3.070 | .078 |
| ≥1 HIP | -.306 | .182 | .736 | .516 | 1.051 | .092 |
| Employment | | | | | | |
| Age | .728 | .238 | 2.071 | 1.299 | 3.301 | .002 |
| ≥1 HIP | .883 | .156 | 2.417 | 1.780 | 3.284 | <.001 |

*Note. df=1 Total N*=1,213. *SE* = standard error; *CI* = confidence interval*; LL* = lower limit*; UL* = upper limit.

[a] 1= <24 years old, 2= ≥24 years old. [b] 1= yes, 2= no.

Multinomial logic regressions were used to determine the likelihood of job attainment and continued education acceptance based on the specific HIP experienced. For each, the dependent variable was first-destination outcomes, the factor was each level of HIP run separately, and the co-variant was age. As shown in Table 7, those who completed undergraduate research experienced a significantly greater likelihood of getting admitted to continued education (B = 1.135, p = .006). Completing undergraduate research resulted in 3.11 times greater likelihood of being predicting enrollment in a continued education programs  A significantly greater likelihood of predicting employment was established for those who completed a co-op (B = 2.042, p < .001), an internship (B = 1.004, p < .001), or worked while enrolled at the University (B = .798, p = .005). Those who completed a co-op were 7.703 times more likely to be employed than those who did not complete a co-op. Graduates were 843 times more likely to be employed if they completed an internship and 2.221 times more likely if they worked while enrolled when controlling for age.

**Table 7**

*The Likelihood of Positive First-Destination Outcomes based on High-Impact Practices while Controlling for Age (December 2019 Graduates)*

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI *LL* | 95% CI *UL* | *P* |
|---|---|---|---|---|---|---|
| Continued education acceptance | | | | | | |
| Age[a] | .451 | .436 | 1.571 | .668 | 3.693 | .301 |
| Co-op[b] | -.316 | 1.155 | .729 | .076 | 7.010 | .785 |
| ePortfolio[b] | .469 | .469 | 1.598 | .638 | 4.004 | .317 |
| Internship[b] | .290 | .393 | 1.337 | .619 | 2.887 | .460 |
| Study abroad[b] | -.349 | .485 | .705 | .273 | 1.824 | .471 |
| Undergraduate research[b] | 1.135 | .415 | 3.110 | 1.378 | 7.021 | .006 |
| Working while Enrolled[b] | -.073 | .404 | .929 | .421 | 2.052 | .856 |
| Employment | | | | | | |
| Age[a] | .621 | .321 | 1.861 | .991 | 3.494 | .053 |
| Co-op[b] | 2.042 | .569 | 7.703 | 2.525 | 23.501 | <.001 |
| ePortfolio[b] | -.181 | .313 | .834 | .452 | 1.540 | .834 |
| Internship[b] | 1.004 | .264 | .834 | 1.627 | 4.580 | <.001 |
| Study abroad[b] | .070 | .290 | 1.072 | .608 | 1.892 | .810 |
| Undergraduate research[b] | -.467 | .329 | 1.346 | .329 | 1.195 | .156 |
| Working while enrolled[b] | .798 | .286 | 2.221 | 1.268 | 3.889 | .005 |

*Note. df=1 Total N*=1,213. *CI* = confidence interval*; LL* = lower limit*; UL* = upper limit.

[a] 1= <24 years old, 2= ≥24 years old. [b] 1= yes, 2= no.

Additional tests were run to establish if a relationship existed between the amount of time spent working while enrolled and first-destination outcomes while controlling for age and results can be seen in Table 8. Those who worked less than 5 hours per week (B = 1.005, p = .024), 5-10 hours per week (B = 1.224, p = .000), 10-15 hours per week (B = .981, p = .001) and 15-20 hours per week (B = .592, p = .017) were significantly more likely to be admitted to continued education after graduation compared to those who did not work. Graduates who worked 5-10 hours per week were 3.4 times more likely to be enrolled in continued education, 10-15 hours

were 2.37 times more likely, and 15-20 hours were 8.81 times more likely compared to those who did not work while enrolled.

Those who worked 5-10 hours per week (B = 1.000, p = .001), 10-15 hours per week (B = .463, p = .050), and over 25 hours per week (B = .793, p = .001) were significantly more likely to be employed after graduation compared to those who did not work. Graduates who worked 5-10 hours per week while enrolled were 2.72 times more likely to be employed, 10-15 hours were 1.59 times more likely to be employed, and those who worked 25 or more hours per week were 2.21 times more likely to be employed compared to those who did not work while enrolled.

**Table 8**

*The Likelihood of Positive First-Destination Outcomes based on Hours Spent Working while Enrolled at the University while Controlling for Age (December 2019 Graduates)*

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI | | *p* |
|---|---|---|---|---|---|---|
| | | | | *LL* | *UL* | |
| Continued education acceptance | | | | | | |
| Age [a] | .569 | .3.3 | 1.766 | .974 | 3.202 | .061 |
| < 5 hours per week [b] | 1.005 | .445 | .024 | 1.141 | 6.543 | .024 |
| 5-10 hours per week [b] | 1.224 | .348 | 3.400 | 1.720 | 6.719 | .000 |
| 10-15 hours per week [b] | .981 | .286 | 2.666 | 1.523 | 4.669 | .001 |
| 15-20 hours per week [b] | .592 | .248 | 1.808 | 1.112 | 2.939 | .017 |
| 20-25 hours per week [b] | .340 | .318 | 1.404 | .753 | 2.621 | .286 |
| > 25 hours per week [b] | .143 | .347 | 1.154 | .584 | 2.279 | .680 |
| Employment | | | | | | |
| Age [a] | .826 | .238 | 2.285 | 1.433 | 3.643 | .001 |
| < 5 hours per week [b] | -.241 | .434 | .786 | .336 | 1.839 | .579 |
| 5-10 hours per week [b] | 1.000 | .288 | 2.719 | 1.547 | 4.779 | .001 |
| 10-15 hours per week [b] | .463 | .263 | 1.589 | 1.001 | 2.521 | .050 |
| 15-20 hours per week [b] | .301 | .190 | 1.351 | .930 | 1.961 | .114 |
| 20-25 hours per week [b] | .380 | .232 | 1.462 | .928 | 2.304 | .101 |
| > 25 hours per week [b] | .793 | .229 | 2.209 | 1.411 | 3.460 | .001 |

*Note. Compared to not working; df=1; Total N*=1,213. *CI* = confidence interval*; LL* = lower limit*; UL* = upper limit.

[a] 1= <24 years old, 2= ≥24 years old. [b]1= < 5, 2 = 5-10, 3 = 10-15, 4 = 15-20, 5 = 20-25, 6 = > 25, 7 = 0.

Significant relationships were established between first-destination outcomes and some HIPs, therefore further examination was done to answer the research question of whether completion of mandatory career courses adds value above and beyond high-impact practices when predicting first-destination outcomes. To better understand the significance of mandatory career courses, a Pearson chi-square was run to determine if first-destination outcomes differed among those who completed a mandatory career course. No significant difference was found $\chi^2(2) = .322$, p = .851, and therefore differences were likely due to chance.

When examining the impact of mandatory career courses on first-destination outcomes, a Pearson chi-square was run and resulted in $\chi^2(2) = .955$, p = .620 showing no significant differences in outcomes between those who completed the mandatory career course and those who did not complete the course. These results are shown in Table 9.

**Table 9**

*First-Destination Outcomes Based on Mandatory Career Course Completion (December 2019 Graduates)*

| | **Continued Education Acceptance** | | | **Employment** | | | **Still Seeking** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | n | % | SR | n | % | SR | n | % | SR | $\chi^2$ | *p* |
| Mandatory career course | 81 | 6.7% | -.6 | 272 | 22.4% | .4 | 141 | 11.6% | -.1 | .955 | .620 |
| No mandatory career course | 130 | 10.7% | .5 | 374 | 30.8% | -.4 | 207 | 17.1% | .1 | | |

*Note. N=1213. SR* = standard residual; *AS* = asymptotic significance.

* $p < .05$.

The impact of HIPs and mandatory career courses have been explored separately, multinomial logic regressions were run to measure differences in the likelihood of positive first-destination outcomes for those who completed mandatory career courses while controlling for HIPs and age. The dependent variable was the first-destination outcomes, the factor was the mandatory career course, and the co-variants were age and the completion of one or more HIP. When controlling for age and participation in one or more HIPs, those who completed a mandatory career course were less likely, but not significantly, to be admitted to continued education compared to those who did not complete the course (B = -.081, p = .650) as seen in Table 10. Those who completed a mandatory career course, while controlling for age and completion of one or more HIP, were slightly more likely to be employed (B = .069, p = .616), but not at a significate level making it likely due to chance.

**Table 10**

*The Likelihood of Positive First-Destination Outcomes based on Completing a Mandatory Career Course when Controlling for Completion of One or More High-Impact Practice and Age (December 2019 Graduates)*

| Variable Controlled | | | | 95% CI | | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *Est(B)* | *LL* | *UL* | *p* |
| Continued education acceptance | | | | | | |
| Age [a] | .526 | .301 | 1.692 | .937 | 3.054 | .081 |
| ≥1 HIP [b] | .306 | .182 | 1.358 | .951 | 1.938 | .092 |
| Mandatory career course [b] | -.081 | .179 | .922 | .649 | 1.310 | .650 |
| Employment | | | | | | |
| Age [a] | .731 | .238 | 2.078 | 1.303 | 3.314 | .002 |
| ≥1 HIP [b] | -.882 | .156 | .414 | .305 | .562 | .414 |
| Mandatory career course [b] | .069 | .138 | 1.072 | .818 | 1.404 | .616 |

*Note. Compared to not working; df=1; Total N*=1,213. *SE* = standard error; *CI*=confidence interval*; LL* = lower limit*; UL* = upper limit.

[a] 1= <24 years old, 2= ≥24 years old. [b] 1= yes, 2= no.

When looking deeper at each HIP, additional multinomial logic regressions were run and similar trends were observed. The dependent variable was the first-destination outcomes, the factor was the mandatory career course, and the co-variants were age and each HIP run separately to see specific benefits added above and beyond the different HIP completed. No significant results benefits were found. As seen in Table 11, completion of a mandatory career course decreased the likelihood of being admitted to continued education when controlling for age and each HIP level, but not at significant levels. For employment, the completion of a mandatory career course resulted in slightly greater, but not significant, odds when controlling for age and co-op (B =.132, p = .338), ePortfolios (B =.073, p = .594), internship (B =.062, p = .656), study abroad (B =.073, p = .592), and undergraduate research (B =.087, p = .525) as seen in Table 12. Controlling for age and working while enrolled, the likelihood of employment was slightly reduced (B =-.263, p = .198), but not significantly, when completing a mandatory career course.

**Table 11**

*The Likelihood of Continued Education Acceptance based on Mandatory Career Course Completion when Controlling for High-Impact Practices and Age (December 2019 Graduates)*

| Variable Controlled | | | | 95% CI | | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *Est(B)* | *LL* | *UL* | *p* |
| Continued education acceptance | | | | | | |
| Age [a] | .498 | .300 | 2.211 | .913 | 2.964 | .098 |
| Co-op | .083 | .454 | .332 | .447 | 2.644 | .854 |
| Mandatory career course [b] | -.086 | .180 | 1.141 | .645 | 1.305 | .632 |
| | | | | | | |
| Age [a] | .494 | .301 | 1.638 | .908 | 2.956 | .101 |
| ePortfolio [b] | -.053 | .254 | .949 | .577 | 1.560 | .836 |
| Mandatory career course [b] | -.085 | .179 | .918 | .647 | 1.305 | .635 |

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI *LL* | 95% CI *UL* | *p* |
|---|---|---|---|---|---|---|
| Age [a] | .507 | .301 | 1.660 | .921 | 2.995 | .092 |
| Internship [b] | .374 | .186 | 1.454 | 1.011 | 2.091 | .044 |
| Mandatory career course [b] | -.079 | .179 | .924 | .650 | 1.313 | .659 |
| Age [a] | .501 | .301 | 1.651 | .916 | 2.975 | .095 |
| Study abroad [b] | .088 | .255 | 1.092 | .662 | 1.801 | .731 |
| Mandatory career course [b] | -.086 | .179 | .918 | .646 | 1.304 | .631 |
| Age [a] | .456 | .302 | 1.578 | .872 | 2.852 | .131 |
| Undergraduate research [b] | -.718 | .212 | .488 | .322 | .739 | < .001 |
| Mandatory career course [b] | -.115 | .180 | .891 | .626 | 1.269 | .523 |
| Age [a] | .389 | .428 | 1.476 | .637 | 3.416 | .364 |
| Working while enrolled [b] | -.194 | .400 | .824 | .376 | 1.805 | .628 |
| Mandatory career course [b] | -.234 | .295 | .791 | .444 | 1.410 | .427 |

*Note. Compared to not working; df=1; Total N*=1,213. *SE* = standard error; *CI* = confidence interval*; LL* = lower limit*; UL* = upper limit.

[a] 1= <24 years old, 2= ≥24 years old. [b] 1= yes, 2= no.

To summarize, the completion of a mandatory career course did not add value above and beyond HIPs in first-destination outcomes for those who graduated in December 2019.

**Table 12**

*The Likelihood of Employment, based on Mandatory Career Course Completion when Controlling for High-Impact Practices and Age (December 2019 Graduates)*

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI *LL* | 95% CI *UL* | *p* |
|---|---|---|---|---|---|---|
| Employment | | | | | | |
| Age [a] | .793 | .237 | 2.211 | 1.389 | 3.519 | < .001 |
| Co-op [b] | -1.104 | .303 | .332 | .183 | .600 | < .001 |

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI | | *p* |
|---|---|---|---|---|---|---|
| | | | | *LL* | *UL* | |
| Mandatory career course [b] | .132 | .138 | 1.141 | .871 | 1.494 | .338 |
| Age [a] | .792 | .236 | 2.208 | 1.389 | 3.509 | < .001 |
| ePortfolio [b] | -.34 | .196 | .967 | .658 | 1.420 | .864 |
| Mandatory career course [b] | .073 | .136 | 1.075 | .823 | 1.404 | .594 |
| Age [a] | .765 | .240 | 2.150 | 1.342 | 3.444 | .001 |
| Internship [b] | -1.022 | .138 | .360 | .274 | .471 | < .001 |
| Mandatory career course [b] | .062 | .140 | 1.064 | .809 | 1.399 | .656 |
| Age [a] | .795 | .236 | 2.214 | 1.394 | 3.515 | < .001 |
| Study abroad [b] | -.007 | .192 | .993 | .682 | 1.446 | .970 |
| Mandatory career course [b] | .073 | .136 | 1.076 | .824 | 1.405 | .592 |
| Age [a] | .816 | .237 | 2.261 | 1.422 | 3.595 | < .001 |
| Undergraduate research [b] | .456 | .194 | 1.578 | 1.080 | 2.308 | .019 |
| Mandatory career course [b] | .087 | .137 | 1.091 | .835 | 1.425 | .525 |
| Age [a] | .531 | .308 | 1.701 | .930 | 3.112 | .085 |
| Working while enrolled [b] | -.539 | .272 | .583 | .342 | .995 | .048 |
| Mandatory career course [b] | -.263 | .204 | .769 | .515 | 1.147 | .198 |

*Note. Compared to not working; df=1; Total N*=1,213. *SE* = standard error; *CI* = confidence interval*; LL* = lower limit*; UL* = upper limit.

[a] 1= <24 years old, 2= ≥24 years old. [b] 1= yes, 2= no.

Research Question 4: Does enrollment in a mandatory career development course add value above and beyond high-impact practices when predicting first-destination outcomes during the COVID-19 global pandemic?

Using the data collected from the December 2020 graduates, a Pearson chi-square and Z test was run to determine if first-destination outcomes differed among those who completed

HIPs. Significant differences were found in fist-destination outcomes for those who completed one or more HIPs compared to those who did not ($\chi^2(2) = 16.558$, $p = < .001$). The standard residual for those still seeking was -2.0 showing that there was significantly less likelihood of still seeking employment or continued education admission among those who completed one or more HIP. These results can be seen in Table 13.

To examine specific HIPs, additional Pearson chi-squares and Z tests were run. Significant differences were shown among those who completed internships with $\chi^2(2) = 20.337$, $p < .001$, study abroad with $\chi^2(2) = 9.734$, $p = .008$, and working while enrolled in the University with $\chi^2(2) = 12.118$, $p = .002$, which were unlikely due to chance and shown in Table 13. Three categories showed no significant differences in first-destination outcomes for 2020 graduates, co-ops with $\chi^2(2) = 2.203$, $p = .332$, ePortfolios with $\chi^2(2) = 5.742$, $p = .057$ and undergraduate research with $\chi^2(2) = 4.127$, $p = .127$.

**Table 13**

*First-Destination Outcomes based on Hight-Impact Practice Completion (December 2020 Graduates)*

| HIP Completion | Continued Education Acceptance | | | Employment | | | Still Seeking | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | n | % | SR | n | % | SR | n | % | SR | $\chi^2$ | AS |
| ≥1 HIP [a] | 141 | 10.6% | .2 | 444 | 33.2% | 1.5 | 250 | 18.7% | -2.0 | 16.558 | < .001 |
| Co-op [a] | 17 | 1.3% | .4 | 51 | 3.8% | .7 | 25 | 1.9% | -1.2 | 2.203 | .332 |
| ePortfolio [a] | 23 | 1.7% | -.8 | 95 | 7.1% | 1.6 | 45 | 3.4% | -1.4 | 5.742 | .057 |
| Internship [a] | 76 | 5.7% | -2.1 | 326 | 24.4% | 2.3 | 177 | 13.2% | -1.4 | 20.337 | < .001 |
| Study abroad [a] | 36 | 2.7% | 2.7 | 59 | 4.4% | -1.2 | 45 | 3.4% | -.4 | 9.734 | .008 |
| Undergraduate research [a] | 42 | 3.1% | 1.0 | 113 | 8.5% | .6 | 61 | 4.6% | -1.4 | 4.127 | .127 |
| Working while enrolled [a] | 163 | 12.2% | 1.9 | 403 | 30.1% | -.8 | 280 | 20.9% | -.4 | 12.188 | .002 |

*Note. n=1,337. SR* = standard residual; *AS* = asymptotic significance.

[a]1= yes, 2= no.

Multinomial logic regressions were used to determine the likelihood of positive first-destination outcomes based on the HIP experienced. Because significant differences in first-destination outcomes were already established by the demographics of age, gender, race, first-generation status, and GPA, these variables were controlled for in this multinomial logic regression. For these regressions, the dependent variable was the first-destination outcome, the factor was one or more HIP, and the co-variants were age, gender, race, first-generation status, and GPA. A significantly greater likelihood for employment was shown for those who completed one or more HIP compared to those who did not ($B = .713$, $p < .001$) and documented in Table 14. Those who completed one or more HIP were 2.201 times more likely to be employed compared to those who completed none. For continued education acceptance, no significant differences were demonstrated by those who completed one or more HIP compared to those who did not complete a HIP. However, age and GPA had a significant relationship with acceptance rates.

**Table 14**

*The Likelihood of Positive First-Destination Outcomes based on One or More High-Impact Practice, while Controlling for Age, Gender, Race, First-Generation Status, and GPA (December 2020 Graduates)*

| Variable Controlled | | | | 95% CI | | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *Est(B)* | *LL* | *UL* | *P* |
| Continued education acceptance | | | | | | |
| Age [a] | -.449 | .453 | .638 | .263 | 1.552 | .322 |
| Gender [b] | .686 | .201 | 1.986 | 1.339 | 2.945 | <.001 |
| Race [c] | -.033 | .069 | .967 | .845 | 1.108 | .629 |
| First-generation [d] | .310 | .269 | 1.363 | .804 | 2.310 | .250 |
| GPA [e] | .532 | .093 | 1.703 | 1.418 | 2.045 | <.001 |
| ≥1 HIP [d] | -.171 | .195 | .383 | .575 | 1.237 | .383 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Employment | | | | | | |
| Age [a] | -.777 | .294 | .460 | .258 | .817 | .008 |
| Gender [b] | .000 | .144 | 1.000 | .753 | 1.327 | .998 |
| Race [c] | -.097 | .050 | .908 | .824 | 1.001 | .052 |
| First-generation [d] | -.131 | .180 | .877 | .616 | 1.249 | .468 |
| GPA [e] | .029 | .063 | 1.030 | .911 | 1.164 | .638 |
| ≥1 HIP [d] | .742 | .145 | 2.101 | 1.582 | 2.790 | <.001 |

*Note. df=1 Total N*=1,337.*SE* = standard error; *CI* = confidence interval*; LL* = lower limit*; UL* = upper limit.

[a]1 = <24 years old, 2 = ≥24 years old. [b]1 = female, 2 = male. [c]1 = American Indian, 2 = Asian, 3 = Black or African American, 4 = Hispanic, 5 = Native Hawaiian/Pacific Islander, 6 = Non-resident alien, 7 = Two or more races, 8 = White. [d]1 = 3.6 – 4.0, 2 = 3.1 – 3.59, 3 = 2.6 – 3.09, 4 = 2.1 – 2.59, 5 = < 2.09. [e]1= yes, 2= no.

To explore the impact of individual HIPs on first-destination outcomes for those who graduated during the global pandemic, additional multinomial logic regressions were. For these regressions, the dependent variable was the first-destination outcome, the factor was each of the HIPs run separately, and the co-variants were age, gender, race, first-generation status, and GPA. Only completion of undergraduate research was found to have a significant increase in the likelihood of being accepted to continued education (B = .739, p = .001) as seen in Table 15. Internships, however, showed a negative impact on the likelihood of being admitted to continued education at an almost significant level (B = -.398, p = .052). As shown in Table 16, those who completed a co-op (B = .742, p = .011) or internships (B = .776, p < .001) showed significantly higher likelihood of employment. Completing undergraduate research resulted in graduates being significantly less likely to be employed (B = -.405, p = .047).

**Table 15**

*The Likelihood of Positive First-Destination Outcomes based on Completion of Specific High-Impact Practices while Controlling for Age, Gender, Race, First-Generation status, and GPA (2020)*

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI | | *p* |
|---|---|---|---|---|---|---|
| | | | | *LL* | *UL* | |
| Continued education acceptance | | | | | | |
| Age [a] | -.433 | .452 | .649 | .267 | 1.574 | .339 |
| Gender [b] | .702 | .204 | 2.017 | 1.353 | 3.007 | < .001 |
| Race [c] | -.031 | .068 | .969 | .848 | 1.108 | .969 |
| First-generation [d] | .278 | .268 | 1.321 | .782 | 2.232 | .298 |
| GPA [e] | .521 | .093 | 1.684 | 1.404 | 2.021 | < .001 |
| Co-op [d] | .336 | .424 | 1.399 | .609 | 3.213 | .429 |
| | | | | | | |
| Age [a] | -.407 | .452 | .665 | .274 | 1.614 | .368 |
| Gender [b] | .703 | .204 | 2.021 | 1.354 | 3.015 | < .001 |
| Race [c] | -.031 | .069 | .969 | .848 | 1.109 | .651 |
| First-generation [d] | .293 | .268 | 1.340 | .793 | 2.266 | .274 |
| GPA [d] | .523 | .093 | 1.687 | 1.405 | 2.024 | < .001 |
| ePortfolio | -.191 | .312 | .827 | .448 | 1.524 | .542 |
| | | | | | | |
| Age [a] | -.472 | .454 | .624 | .256 | 1.518 | .298 |
| Gender [b] | .688 | .201 | 1.990 | 1.342 | 2.951 | < .001 |
| Race [c] | -.040 | .069 | .960 | .838 | 1.100 | .561 |
| First-generation [d] | .324 | .269 | 1.383 | .816 | 2.343 | .228 |
| GPA [e] | .538 | .093 | 1.712 | 1.426 | 2.056 | < .001 |
| Internship [d] | -.398 | .205 | .671 | .449 | 1.003 | .052 |
| | | | | | | |
| Age [a] | -.424 | .453 | .654 | .269 | 1.590 | .349 |
| Gender [b] | .535 | .093 | 2.012 | 1.423 | 2.050 | < .001 |
| Race [c] | -.032 | .069 | .968 | .847 | 1.108 | .640 |
| First-generation [d] | .307 | .268 | 1.359 | .804 | 2.299 | .252 |
| GPA [e] | .535 | .093 | 1.708 | 1.423 | 2.050 | < .001 |
| Study abroad [d] | -.427 | .352 | .653 | .328 | 1.300 | .225 |

| Variable Controlled | | | | 95% CI | | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *Est(B)* | *LL* | *UL* | *p* |
| Age [a] | -.511 | .456 | .600 | .245 | 1.467 | .263 |
| Gender [b] | .653 | .202 | 1.921 | 1.293 | 2.854 | .001 |
| Race [c] | -.038 | .069 | .962 | .840 | 1.102 | .578 |
| First-generation [d] | .258 | .268 | 1.294 | .765 | 2.189 | .337 |
| GPA [e] | .508 | .093 | 1.662 | 1.385 | 1.995 | < .001 |
| Undergraduate research [d] | .739 | .232 | 2.095 | 1.328 | 3.304 | .001 |
| Age [a] | -.442 | .253 | .643 | .265 | 1.562 | .329 |
| Gender [b] | .664 | .202 | 1.942 | 1.306 | 2.887 | .001 |
| Race [c] | -.031 | .069 | .969 | .847 | 1.108 | .648 |
| First-generation [d] | .282 | .268 | 1.325 | .784 | 2.239 | .293 |
| GPA [e] | .533 | .093 | 1.704 | 1.419 | 2.046 | < .001 |
| Working while enrolled [d] | .109 | .205 | 1.115 | .746 | 1.666 | .595 |

*Note. df=1 Total N*=1,337. *SE* = standard error; *CI*=confidence interval*; LL*=lower limit*;* *UL*=upper limit.

[a] 1 = <24 years old, 2 = ≥24 years old. [b] 1 = female, 2 = male. [c] 1 = American Indian, 2 = Asian, 3 = Black or African American, 4 = Hispanic, 5 = Native Hawaiian/Pacific Islander, 6 = Non-resident alien, 7 = Two or more races, 8 = White. [d] 1= yes, 2= no. [e] 1 = 3.6 – 4.0, 2 = 3.1 – 3.59, 3 = 2.6 – 3.09, 4 = 2.1 – 2.59, 5 = < 2.09.

**Table 16**

*The Likelihood of Employment, based on Completion of Specific High-Impact Practices while Controlling for Age, Gender, Race, First-Generation Status, and GPA (December 2020 Graduates)*

| Variable Controlled | | | | 95% CI | | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *Est(B)* | *LL* | *UL* | *p* |
| Employment | | | | | | |
| Age [a] | -.817 | .292 | .442 | .249 | .782 | .005 |
| Gender [b] | .087 | .145 | 1.091 | .821 | 1.449 | .549 |

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI | | *p* |
|---|---|---|---|---|---|---|
| | | | | *LL* | *UL* | |
| Race [c] | -.105 | .049 | .901 | .818 | .992 | .034* |
| First-generation [d] | -.090 | .178 | .914 | .644 | 1.295 | .612 |
| GPA [e] | .059 | .062 | 1.061 | .940 | 1.197 | .339 |
| Co-op [d] | .742 | .293 | 2.099 | 1.183 | 3.726 | .011 |
| | | | | | | |
| Age [a] | -.790 | .290 | .454 | .257 | .802 | .006 |
| Gender [b] | .001 | .146 | 1.001 | .752 | 1.334 | .993 |
| Race [c] | -.103 | .049 | .902 | .819 | .993 | .035 |
| First-generation [d] | -.084 | .178 | .919 | .649 | 1.303 | .637 |
| GPA [e] | .075 | .061 | 1.077 | .955 | 1.215 | .225 |
| ePortfolio [d] | .147 | .221 | 1.158 | .751 | 1.788 | .507 |
| | | | | | | |
| Age [a] | -.731 | .294 | .482 | .271 | .857 | .013 |
| Gender [b] | .017 | .145 | 1.017 | .766 | 1.351 | .906 |
| Race [c] | -.094 | .050 | .911 | .826 | 1.004 | .060 |
| First-generation [d] | -.136 | .181 | .873 | .613 | 1.243 | .450 |
| GPA [e] | .040 | .062 | 1.040 | .921 | 1.176 | .525 |
| Internship [d] | .776 | .142 | 2.172 | 1.644 | 2.870 | < .001 |
| | | | | | | |
| Age [a] | -.787 | .290 | .455 | .258 | .803 | .007 |
| Gender [b] | .023 | .143 | 1.023 | .773 | 1.355 | .871 |
| Race [c] | -.103 | .049 | .902 | .819 | .993 | .036 |
| First-generation [d] | -.078 | .178 | .925 | .652 | 1.311 | .661 |
| GPA [e] | .072 | .062 | 1.075 | .953 | 1.213 | .240 |
| Study abroad [d] | -.025 | .248 | .975 | .600 | 1.586 | .920 |
| | | | | | | |
| Age [a] | -.755 | .291 | .470 | .266 | .831 | .009 |
| Gender [b] | .034 | .143 | 1.035 | .782 | 1.370 | .810 |
| Race [c] | -.102 | .049 | .903 | .820 | .995 | .039 |
| First-generation [d] | -.073 | .178 | .930 | .656 | 1.318 | .683 |
| GPA [e] | .077 | .062 | 1.080 | .958 | 1.219 | .209 |
| Undergraduate research [d] | -.405 | .203 | .667 | .448 | .994 | .047 |

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI | | *p* |
|---|---|---|---|---|---|---|
| | | | | *LL* | *UL* | |
| Age [a] | -.834 | .292 | .434 | .245 | .769 | .004 |
| Gender [b] | -.014 | .145 | .986 | .743 | 1.309 | .925 |
| Race [c] | -.105 | .049 | .901 | .818 | .992 | .033 |
| First-generation [d] | -.081 | .178 | .922 | .651 | 1.306 | .648 |
| GPA [e] | .082 | .062 | 1.085 | .962 | 1.225 | .184 |
| Working while enrolled [d] | .246 | .148 | 1.279 | .956 | 1.711 | .097 |

*Note. df=1 Total N*=1,337. *SE* = standard error; *CI* = confidence interval*; LL* = lower limit*; UL*= upper limit.

[a]1 = <24 years old, 2 = ≥24 years old. [b]1 = female, 2 = male. [c]1 = American Indian, 2 = Asian, 3 = Black or African American, 4 = Hispanic, 5 = Native Hawaiian/Pacific Islander, 6 = Non-resident alien, 7 = Two or more races, 8 = White. [d]1= yes, 2= no. [e]1 = 3.6 – 4.0, 2 = 3.1 – 3.59, 3 = 2.6 – 3.09, 4 = 2.1 – 2.59, 5 = < 2.09.

An additional multinomial logic regression was run to determine if the amount of time spent working while enrolled had any impact on first-destination outcomes. For this regression, the dependent variable was the first-destination outcome, the factor was the amount of time worked per hour while enrolled at the University, and the co-variants were age, gender, race, first-generation status, and GPA. For those who graduated in December 2020, no significant relationships were demonstrated on the first-destination outcome based on time spent working while enrolled at the University, and results can be seen in Table 17.

**Table 17**

*The Likelihood of Positive First-Destination Outcomes, based on Hours Spent Working while Enrolled in the University while Controlling for Age, Gender, Race, First-Generation Status, and GPA (December 2020 Graduates)*

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI | | *p* |
|---|---|---|---|---|---|---|
| | | | | *LL* | *UL* | |
| Continued education acceptance | | | | | | |

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI | | *p* |
|---|---|---|---|---|---|---|
| | | | | *LL* | *UL* | |
| Age [a] | -.502 | .461 | .606 | .245 | 1.496 | .226 |
| Gender [b] | .665 | .204 | 1.945 | 1.305 | 2.898 | .001 |
| Race [c] | -.021 | .069 | .979 | .245 | 1.496 | .277 |
| First-generation [d] | .319 | .271 | 1.376 | .809 | 2.340 | .238 |
| GPA [e] | .539 | .095 | 1.714 | 1.423 | 2.065 | <.001 |
| < 5 hours per week [f] | 1.228 | .663 | 3.413 | .931 | 12.507 | .064 |
| 5-10 hours per week [f] | .075 | .346 | 1.078 | .547 | 2.124 | .828 |
| 10-15 hours per week [f] | .105 | .297 | 1.110 | .620 | 1.988 | .725 |
| 15-20 hours per week [f] | -.350 | .305 | .705 | .387 | 1.282 | .252 |
| 20-25 hours per week [f] | .402 | .331 | 1.495 | .781 | 2.860 | .224 |
| > 25 hours per week [f] | .133 | .336 | 1.143 | .592 | 2.206 | .691 |
| Employment | | | | | | |
| Age [a] | -.852 | .296 | .427 | .239 | .761 | .004 |
| Gender [b] | .000 | .145 | 1.000 | .753 | 1.328 | 1.00 |
| Race [c] | -.104 | .049 | .902 | .818 | .993 | .036 |
| First-generation [d] | -.076 | .178 | .927 | .654 | 1.314 | .669 |
| GPA [e] | .090 | .063 | 1.094 | .967 | 1.238 | .155 |
| < 5 hours per week [f] | .690 | .585 | 1.993 | .633 | 6.278 | .239 |
| 5-10 hours per week [f] | -.093 | .275 | .911 | .531 | 1.563 | .736 |
| 10-15 hours per week [f] | .225 | .218 | 1.252 | .818 | 1.918 | .301 |
| 15-20 hours per week [f] | .106 | .203 | 1.112 | .747 | 1.654 | .601 |
| 20-25 hours per week [f] | .202 | .244 | 1.224 | .759 | 1.973 | .407 |
| > 25 hours per week [f] | .297 | .228 | 1.346 | .860 | 2.107 | .193 |

*Note. Compared to not working; df=1; Total N*=1,337. *SE* = standard error; *CI* = confidence interval*; LL* = lower limit*; UL* = upper limit.

[a] 1 = <24 years old, 2 = ≥24 years old. [b] 1 = female, 2 = male. [c] 1 = American Indian, 2 = Asian, 3 = Black or African American, 4 = Hispanic, 5 = Native Hawaiian/Pacific Islander, 6 = Non-resident alien, 7 = Two or more races, 8 = White. [d] 1= yes, 2= no. [e] 1 = 3.6 – 4.0, 2 = 3.1 – 3.59, 3 = 2.6 – 3.09, 4 = 2.1 – 2.59, 5 = < 2.09. [f] 1= < 5, 2 = 5-10, 3 = 10-15, 4 = 15-20, 5 = 20-25, 6 = > 25, 7 = 0

To better understand the significance of mandatory career courses, a Pearson chi-square was run to determine if first-destination outcomes differed among those who completed a mandatory career course. For the December 2020 graduate cohort, a significant difference in first-destination outcomes was found between those who completed a mandatory career course and those who did not complete a course with $\chi^2(2) = 8.715$, $p = .013$ and not likely due to chance. A greater likelihood of continued education enrollment and less likelihood of still seeking were observed among those who completed a mandatory career course and seen in Table 18.

**Table 18**

*First-Destination Outcomes based on Mandatory Career Course Completion (December 2020 Graduates)*

| | **Continued Education Acceptance** | | | **Employment** | | | **Still Seeking** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | n | % | SR | n | % | SR | n | % | SR. | $\chi^2$ | *p* |
| Mandatory career course Completed | 143 | 10.7% | 1.2 | 393 | 29.4% | .5 | 242 | 18.1% | -1.4 | 8.715 | .013 |
| No mandatory career course completed | 79 | 5.9% | -1.4 | 267 | 20% | -.5 | 213 | 15.9% | 1.7 | | |

*Note. N=1337. SR* = standard residual.

Since significant differences in first-destination outcomes were established between those who completed a mandatory career course and those who did not, more examination was done to better understand this relationship while controlling for significant demographics. A multinomial logic regression was run with the dependent variable of first-destination outcomes, the factor of completion of a mandatory career course, and co-variants of age, gender, race, first-generation

status, and GPA. Those who completed a mandatory career course were significantly more likely to be admitted to continued education compared to those who did not complete a course (B = .588, p = .004) as seen in Table 19. This course completion increased the odds of enrollment in continued education by 1.8 times. No significant relationships were established between completion of a mandatory career course and employment.

**Table 19**

*The Likelihood of Positive First-Destination Outcomes, based on Mandatory Career Course Completion while Controlling for Age, Gender, Race, First-Generation Status, and GPA (December 2020 Graduates)*

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI | | *p* |
|---|---|---|---|---|---|---|
| | | | | *LL* | *UL* | |
| Continued education acceptance | | | | | | |
| Age [a] | -.424 | .454 | .654 | .269 | 1.594 | .350 |
| Gender [b] | .693 | .201 | 1.999 | 1.348 | 2.965 | < .001 |
| Race [c] | -.033 | .068 | .968 | .846 | 1.107 | .632 |
| First-generation [d] | .275 | .268 | 1.317 | .779 | 2.226 | .304 |
| GPA [e] | .524 | .094 | 1.688 | 1.405 | 2.028 | < .001 |
| Mandatory career course [d] | .588 | .202 | 1.800 | 1.212 | 2.673 | .004 |
| Employment | | | | | | |
| Age [a] | -.787 | .290 | .455 | .258 | .804 | .007 |
| Gender [b] | .024 | .143 | 1.024 | .774 | 1.355 | .868 |
| Race [c] | -.104 | .049 | .901 | .818 | .993 | .035 |
| First-generation [d] | -.083 | .178 | .921 | .650 | 1.304 | .642 |
| GPA [e] | .069 | .061 | 1.071 | .950 | 1.208 | .263 |
| Mandatory career course [d] | .152 | .139 | 1.164 | .887 | 1.528 | .273 |

*Note. df=1 Total N*=1,337. *SE* = standard error; *CI* = confidence interval*; LL* = lower limit*; UL* = upper limit.

[a] 1 = <24 years old, 2 = ≥24 years old. [b] 1 = female, 2 = male. [c] 1 = American Indian, 2 = Asian, 3 = Black or African American, 4 = Hispanic, 5 = Native Hawaiian/Pacific Islander, 6 = Non-

resident alien, 7 = Two or more races, 8 = White. [d] 1= yes, 2= no. [e] 1 = 3.6 – 4.0, 2 = 3.1 – 3.59, 3 = 2.6 – 3.09, 4 = 2.1 – 2.59, 5 = < 2.09.

To explore whether mandatory career courses add value above and beyond HIPs on first-destination outcomes, a multinomial logic regression. The dependent variable was first-destination outcomes, the factor was the completion of a mandatory career course, and the co-variants were age, gender, race, first-generation status, GPA, and completion of one or more HIP. Completion of a mandatory career course showed a significantly greater likelihood of being admitted to continued education (B = .595, p = .003) for those who graduated during the global pandemic while controlling for the completion of one or more HIP, age, gender, race, first-generation status, and GPA. The completion of a mandatory career course increased the odds of being admitted to a continued education program by 1.813 times above and beyond the completion of one or more HIPs. No significant value was established for completing a mandatory career course in addition to one or more HIP for employment as seen in Table 20.

**Table 20**

*The Likelihood of Continued Education Acceptance based on Mandatory Career Course Completion, while Controlling for Completion of One or More High-Impact Practices, Age, Gender, Race, First-Generation Status, and GPA (December 2020 Graduates)*

| Variable Controlled | | | | 95% CI | | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *Est(B)* | *LL* | *UL* | *p* |
| Continued education acceptance | | | | | | |
| Age [a] | -.440 | .455 | .644 | .264 | 1.569 | .333 |
| Gender [b] | .698 | .202 | 2.010 | 1.354 | 2.985 | <.001 |
| Race [c] | -.037 | .069 | .964 | .841 | 1.104 | .593 |
| First-generation [d] | .299 | .270 | 1.348 | .794 | 2.287 | .268 |
| GPA [e] | .531 | .094 | 1.701 | 1.414 | 2.045 | <.001 |
| ≥1 HIP [d] | .2020 | .197 | 1.224 | .833 | 1.800 | .304 |
| Mandatory career course [d] | .595 | .202 | 1.813 | 1.219 | 2.696 | .003 |
| Employment | | | | | | |

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI | | *p* |
|---|---|---|---|---|---|---|
| | | | | *LL* | *UL* | |
| Age [a] | -.775 | .294 | .461 | .259 | .820 | .008 |
| Gender [b] | .000 | .145 | 1.000 | .753 | 1.328 | .999 |
| Race [c] | -.098 | .050 | .907 | .823 | 1.00 | .050* |
| First-generation [d] | -.134 | .180 | .874 | .614 | 1.245 | .457 |
| GPA [e] | .028 | .063 | 1.028 | .909 | 1.162 | .659 |
| ≥1 HIP [d] | -.735 | .145 | .479 | .361 | .637 | <.001 |
| Mandatory career course [d] | .112 | .141 | 1.118 | .849 | 1.473 | .427 |

*Note. Compared to not working; df=1; Total N*=1,213. *SE* = standard error; *CI* = confidence interval*; LL* = lower limit*; UL* = upper limit.

[a] 1 = <24 years old, 2 = ≥24 years old. [b] 1 = female, 2 = male. [c] 1 = American Indian, 2 = Asian, 3 = Black or African American, 4 = Hispanic, 5 = Native Hawaiian/Pacific Islander, 6 = Non-resident alien, 7 = Two or more races, 8 = White. [d] 1= yes, 2= no. [e] 1 = 3.6 – 4.0, 2 = 3.1 – 3.59, 3 = 2.6 – 3.09, 4 = 2.1 – 2.59, 5 = < 2.09.

When looking deeper at each HIP level, additional trends were observed and documented in Table 21. Additional multinomial logic regressions were run with the dependent variable of first-destination outcomes, the factor was mandatory career course, and the co-variants were age, gender, race, first-generation status, and each HIP run separately to see specific benefits added above and beyond the different HIP completed. While controlling for each HIP, as well as age, gender, race, first-generation status, and GPA, those who completed a mandatory career course were significantly more likely to be admitted into a continued education program for every individual HIP category. In other words, for those who graduated during the global pandemic in December 2020, completing a mandatory career course added significant value above and beyond each HIP option for admission to continued education.

**Table 21**

*The Likelihood of Continued Education Acceptance based on Mandatory Career Course Completion, while Controlling for Completion of Specific High-Impact Practices, Age, Gender, Race, First-Generation Status, and GPA (December 2020 Graduates)*

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI *LL* | 95% CI *UL* | *p* |
|---|---|---|---|---|---|---|
| Continued education acceptance | | | | | | |
| Age [a] | -.431 | .455 | .650 | .266 | 1.584 | .343 |
| Gender [b] | .695 | .204 | 2.004 | 1.342 | 2.991 | <.001 |
| Race [c] | -.033 | .068 | .968 | .846 | 1.106 | .630 |
| First-generation [d] | .274 | .268 | 1.315 | .778 | 2.224 | .307 |
| GPA [e] | .520 | .094 | 1.683 | 1.401 | 2.021 | <.001 |
| Co-op [d] | -.168 | .429 | .846 | .365 | 1.959 | .696 |
| Mandatory career course [d] | .572 | .203 | 1.771 | 1.189 | 2.639 | .005 |
| | | | | | | |
| Age [a] | -.405 | .454 | .667 | .274 | 1.624 | .372 |
| Gender [b] | .733 | .205 | 2.082 | 1.392 | 3.113 | <.001 |
| Race [c] | -.034 | .069 | .967 | .845 | 1.106 | .623 |
| First-generation [d] | .290 | .268 | 1.337 | .790 | 2.263 | .279 |
| GPA [e] | .517 | .094 | 1.676 | 1.395 | 2.014 | <.001 |
| ePortfolio [d] | .300 | .316 | 1.350 | .727 | 2.509 | .342 |
| Mandatory career course [d] | .613 | .203 | 1.847 | 1.240 | 2.750 | .003 |
| | | | | | | |
| Age [a] | -.472 | .455 | .624 | .255 | 1.523 | .300 |
| Gender [b] | .702 | .202 | 2.018 | 1.359 | 2.997 | <.001 |
| Race [c] | -.043 | .069 | .958 | .836 | 1.098 | .536 |
| First-generation [d] | .308 | .270 | 1.361 | .802 | 2.309 | .253 |
| GPA [e] | .535 | .094 | 1.707 | 1.420 | 2.052 | <.001 |
| Internship [d] | .378 | .206 | 1.459 | .975 | 2.184 | .066 |
| Mandatory career course [d] | .586 | .203 | 1.797 | 1.208 | 2.674 | .004 |
| | | | | | | |
| Age [a] | -.426 | .455 | .653 | .268 | 1.594 | .350 |
| Gender [b] | .713 | .202 | 2.039 | 1.373 | 3.028 | <.001 |
| Race [c] | -.034 | .068 | .966 | .845 | 1.105 | .618 |
| First-generation [d] | .297 | .269 | 1.346 | .755 | 3.001 | .245 |

| Variable Controlled | | | | 95% CI | | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *Est(B)* | *LL* | *UL* | *p* |
| GPA [e] | .530 | .094 | 1.699 | 1.414 | 2.042 | <.001 |
| Study abroad [d] | .409 | .352 | 1.506 | .755 | 3.001 | .245 |
| Mandatory career course [d] | .583 | .202 | 1.791 | 1.206 | 2.661 | .004 |
| | | | | | | |
| Age [a] | -.515 | .459 | .597 | .243 | 1.467 | .261 |
| Gender [b] | .672 | .203 | 1.958 | 1.317 | 2.913 | <.001 |
| Race [c] | -.038 | .069 | .963 | .841 | 1.102 | .583 |
| First-generation [d] | .250 | .269 | 1.284 | .758 | 2.173 | .352 |
| GPA [e] | .505 | .094 | 1.657 | 1.379 | 1.990 | <.001 |
| Undergraduate research [d] | -.671 | .234 | .511 | .323 | .809 | .004 |
| Mandatory career course [d] | .529 | .204 | 1.696 | 1.137 | 2.531 | .010 |
| | | | | | | |
| Age [a] | -.446 | .455 | .640 | .262 | 1.562 | .327 |
| Gender [b] | .676 | .203 | 1.967 | 1.321 | 2.927 | <.001 |
| Race [c] | -.033 | .069 | .967 | .846 | 1.106 | .627 |
| First-generation [d] | .273 | .268 | 1.313 | .777 | 2.221 | .309 |
| GPA [e] | .528 | .094 | 1.696 | 1.411 | 2.039 | <.001 |
| Working while enrolled [d] | -.107 | .206 | .899 | .600 | 1.345 | .604 |
| Mandatory career course [d] | .585 | .202 | 1.794 | 1.208 | 2.665 | .004 |

*Note. df=1 Total N*=1,337. *SE* = standard error; *CI* = confidence interval*; LL* = lower limit*; UL* = upper limit.

[a] 1 = <24 years old, 2 = ≥24 years old. [b] 1 = female, 2 = male. [c] 1 = American Indian, 2 = Asian, 3 = Black or African American, 4 = Hispanic, 5 = Native Hawaiian/Pacific Islander, 6 = Non-resident alien, 7 = Two or more races, 8 = White. [d] 1= yes, 2= no. [e] 1 = 3.6 – 4.0, 2 = 3.1 – 3.59, 3 = 2.6 – 3.09, 4 = 2.1 – 2.59, 5 = < 2.09.

When controlling for each level of HIP and the demographics of age, gender, race, first-generation status, and GPA, those who completed a mandatory career course were more likely, but not significantly more likely, to be employed for any HIP category. In other words, for those who graduated during the global pandemic in December 2020, completing a mandatory career

course did not add significant value above and beyond any HIP option for employment. All findings can be found in Table 22.

**Table 22**

*The Likelihood of Employment, based on Completion of a Mandatory Career Course, while Controlling for Completion of Specific High-Impact Practices, Age, Gender, Race, First-Generation Status, and GPA (December 2020 Graduates)*

| Variable Controlled | | | | 95% CI | | |
|---|---|---|---|---|---|---|
| | *B* | *SE* | *Est(B)* | *LL* | *UL* | *p* |
| Employment | | | | | | |
| Age [a] | -.815 | .292 | .443 | .250 | .784 | .005 |
| Gender [b] | .084 | .145 | 1.088 | .819 | 1.445 | .561 |
| Race [c] | -.105 | .049 | .443 | .817 | .992 | .033 |
| First-generation [d] | -.092 | .178 | .912 | .643 | 1.294 | .605 |
| GPA [e] | .058 | .062 | 1.059 | .939 | 1.195 | .350 |
| Co-op [d] | -.710 | .296 | .492 | .275 | .879 | .017 |
| Mandatory career course [d] | .091 | .141 | 1.095 | .831 | 1.444 | .519 |
| | | | | | | |
| Age [a] | -.789 | .290 | .454 | .257 | .803 | .007 |
| Gender [b] | .006 | .146 | 1.006 | .755 | 1.340 | .969 |
| Race [c] | -.104 | .049 | .901 | .818 | .992 | .034 |
| First-generation [d] | -.087 | .178 | .917 | .647 | 1.30 | .627 |
| GPA [e] | .071 | .062 | 1.074 | .952 | 1.211 | .247 |
| ePortfolio [d] | -.124 | .223 | .883 | .571 | 1.366 | .576 |
| Mandatory career course [d] | .144 | .140 | 1.155 | .879 | 1.518 | .302 |
| | | | | | | |
| Age [a] | -.729 | .294 | .483 | .271 | .859 | .013 |
| Gender [b] | .019 | .145 | 1.019 | .767 | 1.354 | .896 |
| Race [c] | -.095 | .050 | .910 | .825 | 1.003 | .057 |
| First-generation [d] | -.142 | .181 | .868 | .609 | 1.237 | .434 |
| GPA [e] | .036 | .062 | 1.036 | .917 | 1.172 | .566 |
| Internship [d] | -.786 | .143 | .456 | .345 | .603 | <.001 |
| Mandatory career course [d] | .187 | .141 | 1.206 | .914 | 1.590 | .185 |
| | | | | | | |
| Age [a] | -.787 | .290 | .455 | .258 | .804 | .007 |

| Variable Controlled | *B* | *SE* | *Est(B)* | 95% CI | | *p* |
|---|---|---|---|---|---|---|
| | | | | *LL* | *UL* | |
| Gender [b] | .024 | .143 | 1.025 | .774 | 1.357 | .865 |
| Race [c] | -.104 | .049 | .901 | .818 | .993 | .035 |
| First-generation [d] | -.081 | .178 | .922 | .650 | 1.308 | .649 |
| GPA [e] | .069 | .062 | 1.072 | .950 | 1.209 | .261 |
| Study abroad [d] | .026 | .248 | 1.026 | .631 | 1.667 | .918 |
| Mandatory career course [d] | .152 | .139 | 1.165 | .887 | 1.529 | .272 |
| | | | | | | |
| Age [a] | -.751 | .291 | .472 | .267 | .267 | .010 |
| Gender [b] | .037 | .143 | 1.038 | .784 | 1.375 | .794 |
| Race [c] | -.103 | .049 | .902 | .819 | .994 | .038 |
| First-generation [d] | -.076 | .178 | .927 | .654 | 1.315 | .671 |
| GPA [e] | .074 | .062 | 1.077 | .954 | 1.215 | .231 |
| Undergraduate research [d] | .433 | .205 | 1.542 | 1.032 | 2.304 | .035 |
| Mandatory career course [d] | .184 | .140 | 1.202 | .914 | 1.581 | .188 |
| | | | | | | |
| Age [a] | -.833 | .292 | .435 | .245 | .771 | .004 |
| Gender [b] | -.012 | .145 | .988 | .744 | 1.312 | .934 |
| Race [c] | -.106 | .049 | .900 | .817 | .991 | .032 |
| First-generation [d] | -.085 | .178 | .919 | .648 | 1.302 | .634 |
| GPA [e] | .079 | .062 | 1.082 | .958 | 1.221 | .203 |
| Working while enrolled [d] | -.243 | .148 | .785 | .587 | 1.050 | .102 |
| Mandatory career course [d] | .148 | .139 | 1.159 | .883 | 1.522 | .288 |

*Note. df=1 Total N*=1,337. *SE* = standard error; *CI* = confidence interval*; LL* = lower limit*; UL* = upper limit.

[a]1 = <24 years old, 2 = ≥24 years old. [b]1 = female, 2 = male. [c]1 = American Indian, 2 = Asian, 3 = Black or African American, 4 = Hispanic, 5 = Native Hawaiian/Pacific Islander, 6 = Non-resident alien, 7 = Two or more races, 8 = White. [d]1= yes, 2= no. [e]1 = 3.6 – 4.0, 2 = 3.1 – 3.59, 3 = 2.6 – 3.09, 4 = 2.1 – 2.59, 5 = < 2.09.

# Chapter 5

# Discussion

## Overview

This quantitative study aimed to explore the value added by mandatory career courses and involvement in high-impact practices (HIPs) to first-destination outcomes. In addition, participation in HIPs and first-destination outcomes were examined through the lens of the COVID-19 global pandemic. The findings will provide greater insights into how emerging adults learn the skills needed to make the transition into employment or continued education. This knowledge will help universities better align resources to assist in the efforts to support learning in times of both economic growth and crisis.

## Discussion of FDS Outcomes

Findings showed that first-destination outcomes differed significantly between those who graduated in December 2019 and those who graduated in the middle of the COVID-19 global pandemic. Specifically, a significantly greater percentage of students were still seeking employment or continued education six months after graduation among the mid-pandemic graduates (December 2020) compared to those who graduated in December 2019. With both graduate cohorts, non-traditional college-aged students experienced significant differences in first-destination outcomes. Non-traditional college-aged graduates were significantly more likely to be employed in the 2019 cohort, however, they were significantly more likely to be still seeking six months after graduation for the 2020 cohort. Significantly more females were enrolled in continued education compared to males in the 2020 cohort. Also, it was noted that non-resident aliens and Asian graduates experienced the greatest negative impacts in employment compared to their white peers in 2020. Additional differences were also observed

based on gender, race, first-generation status, and GPA in the December 2020 graduates only. These findings demonstrate that non-traditional adult learners and those who identify as non-resident alien or Asian were most negatively impacted by the economic impact of the COVID-19 global pandemic in terms of employment and female graduates in December 2020 sought continued education at a much higher rate compared to males.

Participation in HIPs differed significantly between the two cohorts as well with a greater percentage of graduates from the December 2019 cohort completing one or more HIP. When examined individually, there were significantly fewer graduates with internship and study abroad experiences in the December 2020 cohort compared to those who graduated in December 2019. These findings were consistent with the reported drop in internship postings during early 2020 and travel restrictions put in place around the globe (Stansell, 2020). Completion of co-ops, internships, undergraduate research, or working with enrolled in the University had a significantly positive impact on first-destination outcomes in both cohorts. These findings demonstrate value to these experiences above what is currently known about the positive impacts on career confidence, retention, and engagement (Savoca et al., 2018; Jackson & Wilton, 2016).

For those who graduated in December 2019, during a strong economy, those who completed one or more HIP were significantly more likely to be employed within six months of graduation when controlling for age. When divided into specific HIPs and controlling for age, those who completed a co-op, internship, or working while enrolled in the University were more likely to be employed. The increased likelihood of employment upon completion of an internship supports the findings of Miller et.al (2018) who saw similar results for those who completed an internship, capstone, and service-learning. While it did not appear to impact employment rates, completing undergraduate research increased the likelihood of being admitted to continued

education significantly. Working with enrolled in the University was broken down into hour increments (less than 5, 5-10, 10-15, 15-20, 20-25, and more than 25) and when controlling for age, those who worked less than 5 hours per week, 5-10, 10-15, and 15-20 hours per week were significantly more likely to be admitted to continued education compared to those who did not work. Also, graduates who worked 5-10, 10-15, and over 25 hours per week were significantly more likely to be employed within six months of graduation. Interestingly, the completion of a mandatory career course did not appear to add value above and beyond the completion of one or more HIP or any specific HIP for the December 2019 graduates during a healthy economic climate.

Among those who graduated mid-pandemic in December 2020, graduates who completed one or more HIP were significantly less likely to still be seeking six months after graduation, while controlling for age, gender, race, first-generation status, and GPA. When HIPs were examined separately, the completion of a co-op or internship significantly increased the likelihood of employment, even when controlling for age, gender, race, first-generation status, and GPA. Undergraduate research increased the chances of being admitted to continued education and internships significantly decreased admission when controlling for the same demographics. Graduates who worked 0-5 hours per week while enrolled at the University showed significant improvements in continued education acceptance rates in both cohorts. Those working less than 5 hours per week were more likely to be admitted to continued education, but time spent working while enrolled did not appear to have any other significant impact on first-destination outcomes otherwise.

When examining the relationships between mandatory career courses and first-destination outcomes for December 2020 graduates while controlling for age, gender, race, first-

generation status, and GPA, those who completed a career course were significantly more likely to be admitted to continued education and less likely to be still seeking. Similar results were observed when controlling each HIP showing that mandatory career courses added value above and beyond HIP for admission to continued education. No significant value appeared to be added however when examining employment during the COVID-19 global pandemic. Given these findings, it may be concluded that mandatory career courses may need to reexamine the content to add additional benefits for employment during economic downturns.

For employment, completing one or more HIP made a significant impact for both groups of graduates. This remained true for the specific HIPs of co-op and internships. Co-ops, internships, and working while enrolled significantly improved chances of employment for the 2020 cohort. Undergraduate research significantly decreased the likelihood of employment for both cohorts. When the amount of time spent working while enrolled was split, those who worked 5-10 and over 25 hours per week were significantly more likely to be employed among the 2019 graduates, and those who worked 10-15 were significantly more likely to be employed among the 2020 cohort. Since the HIPs that proved to provide the most benefit toward employment were also the ones who provide the most real-world exposure to the workplace and employment activities, these findings demonstrate the role of Experiential Learning Theory concerning emerging adults and the employability of graduates.

When controlling for HIP participation, first-destination outcomes were significantly impacted by the completion of a career course for those in the 2020 cohort, but not significant for the 2019 cohort. In other words, a mandatory career course did not appear to add value above and beyond HIPs for those who graduated prior to the pandemic but did add significant value for those in the pandemic and continuing their education.

## Limitations

Limitations of this study include the use of established data sets which consisted of required surveys and self-reported outcomes. These elements create an inherent risk of inaccurate data due to disinterest or the desire to inflate reality. Also, using an established dataset restricted the questions asked of participants. Additional information would have been useful to gain a better understanding of the outcomes including asking if the current economic times influenced the decision of the students to pursue their post-graduation plans and if the employment aligns with their program of study. For instance, the decision to continue education for many may have been solely influenced by the job options available at the time of graduation and not due to desire. For these students, the choice of HIP chosen earlier in their education career may not have been aligned with these goals. The specific educational pursuits were also not examined due to the lack of knowledge. If the education program was graduate or professional school, the requirements would be different than if the additional education was another certificate or bachelor's degree. For those continuing their education, it would have been useful to examine entrance exam scores if applicable to gain a fuller view of the importance of HIPs, GPA, and exam scores in the acceptance to continued education.

Career courses in and of themselves have a bit of ambiguity as to content. Some career courses focus on career and self-exploration and the selection of a major. Typically these courses are targeted to first or second-year students and taught through a career development theoretical framework with a focus on self-exploration and self-efficacy. Others are targeted to junior level or higher with a focus on the job search or career-life planning. Often these courses are less theoretical in nature with an emphasis on marketing materials and have a how-to style of instruction. Some of these courses also discuss graduate school preparation but that is not always

the case. When a career course is mandated in a curriculum, it is typically targeted to the job search in an attempt to prepare students to secure employment upon graduation. It is assumed that similar topics were covered in the courses that are mandated in these curricula, but that may not be true. Without reviewing the syllabi, it is unclear if these courses are equivalent in scope which may impact the internal validity of the study. If one course was more career development focused or did not discuss continued education, there may be a false equivalency in this study. For this study, the mandatory career courses were part of the curriculum in the College Liberal Arts and the College of Business. The course for the College of Liberal Arts is typically taught to those at sophomore status while the College of Business has a course taught at each class standing making it more difficult to draw direct comparisons between content and timing of courses.

The samples primarily consisted of white, traditional college-aged students (24 years old or younger) in the southeast and therefore the findings may affect generalizability to other populations or regions of the country. The timing and specific university population and region setting of this study would have also limited the generalizability of the results. Being a non-urban campus would likely negatively influence the number of options available for internships and co-ops compared to universities situated among vast employers. Other professional development experiences were not explored in this study which may have influenced the findings as well. These include participation in optional career courses, use of career services on campus, personal career networks and mentors, and other options for student involvement would be compounding variables that warrant additional exploration.

## Implications for Practice

Given the economic impact and high unemployment rate during the COVID-19 global pandemic, it was to be expected that first-destination outcomes would be negatively impacted for those who graduated in the middle of the pandemic. Similarly, the lower involvement in co-ops, internships, and study abroad could be predicted due to the cancelation of these programs and international travel restrictions during COVID-19. These trends and the findings of this study may be beneficial to students in helping them adapt more quickly to career shocks in the future. By knowing how this impacted others, students can prepare more effectively and hopefully minimize the anxiety and fear experienced.

It appears from these findings that adults may be learning the needed skills for employment through HIPs more effectively than through mandatory career courses. These findings supported Kuh's (2008) assertion that universities should encourage students to participate in at least one HIP connected to their field of study. This however brings up additional questions. Do HIPs better prepare students with career readiness competencies or skills better than courses? Or is it assumed to be the case by employers and educational institutions? If it is true that HIPs are using experiential learning practices to better prepare adults for the transition to employment or continued education, higher education institutions may need to evaluate how they bring awareness to internships, co-ops, student employment, and undergraduate research and find additional means to encourage participation based on post-graduation goals. In particular, co-ops, internships, and undergraduate research appear to have the greatest impact on positive first-destination outcomes depending on the goals and students may benefit from the inclusion of these experiences built into the curriculum of academic programs. These findings also support the effort to include student employment on the list of HIPs given the established literature showing the benefits of retention and better time-

management skills, and now the connection to positive first-destination outcomes for those who work 20 hours or less (Zilvinskis & McCormick, 2019; McClellan et al., 2018; Savoca, 2018).

Although these findings do not demonstrate significantly positive first-destination outcomes for those in mandatory career courses, literature has shown support for these courses in the career decision-making self-efficacy of those enrolled proving a benefit of completion (Reese & Miller, 2016; Conner & Gilmore, 2012). Potentially combining these efforts would make for a more robust and effective course. Freeman et al. (2020) recommended combining a HIP into a capstone course, but adding one into a career course may also prove beneficial to students.

First-destination outcomes and career decision-making self-efficacy (CDMSE) are two different distinctly different measures, and both can prove problematic due to their limited scope and a general lack of definition for success. Does success in a graduating student mean finding a job or continuing education? Or does it mean feeling confident in their major or career path? In literature up to this point, no direct link has connected CDMSE and first-destination outcomes. Instead, CDMSE has been shown to benefit retention and minimize changes in major which are both positive but not connected to long-term benefits. On the other hand, it has been discussed that using first-destination data can be challenging as a way of measuring success in preparing students for employment given the impact of the employment market in specific regions and industries, and as shown in this study, during times of economic difficulties such as global pandemics. Bridgstock (2009) notes,

> "These statistics might be interpreted to suggest that creative/performing arts graduates are fundamentally less 'employable' than other graduates, but it may also mean that they exhibit different labour force characteristics than those working in other fields; that

competition for work in the arts may be stronger than in other fields; and that work opportunities are often on a self-employed, part-time or casual basis," (p. 33).

Universities may need to define what success looks like before establishing a measurement for outcomes. These outcomes and definitions of success could then be used to better inform the learning objectives of these courses that would align with these institution objectives and should also be developed with the input of employers, graduate school admissions officers, and career services. However, it is important to note that despite the content being taught, other variables will influence the first-destination outcomes of students in any major and should not be an indictment of any specific program, staff, faculty, or college. For instance, despite what is taught, a course or program cannot force a student to do what they have been instructed. First-destination outcomes help potential students understand the return on investment for their degrees, so these outcomes should be easily accessed on university websites and presented in clear terms that may be understood by prospective students and families. Perhaps a more holistic view of success would be beneficial as well such as the perspective of alumni or the career success seen years past a degree being earned. This may be done by surveying graduates five years post-graduation and identifying what they are doing and how it relates to their education along with satisfaction in their careers could be another measure of success. Determining if these alumni view their degree as valuable at that time would make a fuller view of the return on investment as well.

## Future Research

This study is the first of its kind to fully explore robust first-destination outcomes and the impact of HIPs, mandatory career courses, and unanticipated economic troubles. This research warrants further study to understand how higher education can more thoroughly prepare students

for success after graduation and how adult learners are acquiring the needed skills to make a smooth transition. Internships, co-ops, and working while enrolled proved significant in employment outcomes during typical economic times. Further analysis should be done to determine if the quantity of internships or co-ops influences employment outcomes in or out of the field of study. Additional demographics may also be controlled for to get more insights from this data. Controlling for college or major may impact the significance of some of the relationships established. Also, for those who are working while enrolled, does the type of work performed while enrolled make a difference? Identifying the specific skills or career readiness competencies that are being acquired during this time would be beneficial for both students and employers to recognize to maximize the benefits of the experience.

Since mandatory career courses were shown to add limited value above and beyond HIPs, further studies should be conducted to explore the content of these courses, influences in building content, who is teaching, and at what point in the curriculum they are being required for better understanding. These findings may provide insights on how to reimagine the classes to increase rates of employment and graduate school acceptance. Also, mandatory career courses are less common than opt-in career courses, so the first-destination outcomes of those who opt-in to career courses warrant further study.

Breaking up the option for continuing education into graduate school and other programs would be beneficial to explore as well. This may give more insights into the role of GPA, entrance exam scores, and non-HIPs including job shadowing, mentors, and volunteerism on graduate school admissions.

Expanding this study to additional universities of varying sizes and demographics would be useful to establish trends that are more likely to be transferable across institutions. Continuing

this analysis in a longitudinal study will also prove useful to determine if the findings remain true or if they change as additional efforts are made to prepare students.

## Conclusion

It is evident from the findings of this study that the global pandemic greatly influenced the rate of HIPs experienced and the positive first-destination outcomes of graduates. In addition, HIPs were shown to have a much higher impact on first-destination outcomes than mandatory career courses, but not all HIPs hold the same weight of influence. Further studies are warranted to get a better view of these courses and HIPs to better prepare students for success and align university resources. Mandatory career courses showed value for admission to continued education programs during the pandemic which demonstrates the importance of the skills being taught to emerging adults and adult learners. These courses need further study to strengthen the content to add additional value for employment to better prepare graduates for the world of work.

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**Appendix A**

# FDS F19

First Destination Survey

This survey is designed to collect information about your plans after graduation. It should take less than five minutes. Completion of this survey is the final pre-graduation expectation associated with the AT Hold on your account.

If you have questions about this survey, please email the Office of Academic Assessment at assess@auburn.edu.

Please visit the University Career Center website for more information on their services and resources (or call (334) 844-4744).

Which of the following **BEST** describes your **PRIMARY** plans after graduation?

- ○ I have accepted full-time employment or will be self-employed (on average 30 hours or more per week)
- ○ I have accepted part-time employment or will be self-employed (on average less than 30 hours per week)
- ○ I will participate in a volunteer or service program (e.g., Peace Corps, Teach for America, mission work)
- ○ I will serve in the U.S. Military
- ○ I will be enrolled in additional coursework (e.g., graduate/professional study)
- ○ I will continue to seek employment
- ○ I will continue to seek enrollment in additional coursework (e.g., graduate/professional study)
- ○ Not seeking employment or continuing education at this time
- ○ Other, please describe: _____

Which service branch are you joining?

- ○ Air Force
- ○ Army
- ○ Coast Guard
- ○ Navy
- ○ Marine Corps

Page 2 of 8
What is your rank?

_____

Which of the following best describes your employment?

- ○ Organization/Company
- ○ Entrepreneur
- ○ Freelancer
- ○ Temporary/Contract work assignment
- ○ Postgraduate internship or fellowship
- ○ Other, please describe: _____

Please provide the following information about your employment:

- ○ Company/Organization's Name:

_____

- ○ City: _____
- ○ State: _____
- ○ Your Job Title: _____
- ○ Expected Annual Salary (e.g., 51000)

_____

- ○ Signing Bonus (e.g., 3500) _____
- ○ Moving or Relocation Bonus (e.g., 2000)

_____

- ○ Is your position commission based? (Yes or No):

_____

Please select an occupational group, sub-group, and occupational title for your job.
Occupational group:
Occupational sub-group:
Occupational title:
▼ Management Occupations ... Military Specific Occupations ~ Military Enlisted Tactical Operations and Air/Weapons Specialists and Crew Members ~ Military Enlisted Tactical Operations and Air/Weapons Specialists and Crew Members, All Other
Page 3 of 8
How directly is your job related to your primary major?

- ○ Directly related
- ○ Indirectly related
- ○ Not related

Please provide the following information about your organization:

- ○ Organization Name: _____
- ○ Assignment City: _____
- ○ Assignment State: _____
- ○ Assignment Country: _____
- ○ Your Role or Title: _____

Please identify the institution in which you will be enrolled.
State
Institution
▼ Alabama ... Wyoming ~ University of Wyoming
If your institution is international or not listed above, please list it here.
_____
Page 4 of 8
Please identify the degree sought:

- ○ Doctor of Audiology
- ○ Doctor of Dental Surgery
- ○ Doctor of Education
- ○ Doctor of Medical Dentistry
- ○ Doctor of Medicine
- ○ Doctor of Ministry
- ○ Doctor of Nursing Practice
- ○ Doctor of Occupational Therapy
- ○ Doctor of Optometry
- ○ Doctor of Osteopathic Medicine

- ○ Doctor of Pharmacy
- ○ Doctor of Philosophy
- ○ Doctor of Podiatric Medicine
- ○ Doctor of Psychology
- ○ Doctor of Social Work
- ○ Doctor of Veterinary Medicine
- ○ Educational Specialist
- ○ Graduate Certificate
- ○ Juris Doctor
- ○ Master of Accountancy
- ○ Master of Aerospace Engineering
- ○ Master of Agriculture
- ○ Master of Applied Mathematics
- ○ Master of Aquaculture
- ○ Master of Arts
- ○ Master of Arts in College Teaching



- ○ Master of Building Construction
- ○ Master of Business Administration
- ○ Master of Communication Disorders
- ○ Master of Chemical Engineering
- ○ Master of Civil Engineering

- ○ Master of Communication
- ○ Master of Community Planning
- ○ Master of Computer Science and Engineering
- ○ Master of Design Build
- ○ Master of Education
- ○ Master of Electrical Engineering
- ○ Master of Finance
- ○ Master of Fine Arts
- ○ Master of French Studies
- ○ Master of Forestry
- ○ Master of Hispanic Studies
- ○ Master of Integrated Design and Construction
- ○ Master of Industrial Design
- ○ Master of Industrial and Systems Engineering
- ○ Master of Landscape Architecture
- ○ Master of Mechanical Engineering
- ○ Master of Manufacturing Systems Engineering
- ○ Master of Management Information Systems
- ○ Master of Materials Engineering
- ○ Master of Music
- ○ Master of Natural Resources
- ○ Master of Probability and Statistics

- ○ Master of Public Admininstration
- ○ Master of Real Estate Development
- ○ Master of Science
- ○ Master of Software Engineering
- ○ Master of Technical and Professional Communication
- ○ Master of Zoological Studies
- ○ Other

Please list your degree here:

_____

Please identify the type of degree sought:

- ○ Master's or Educational Specialist
- ○ Professional Doctorate (DVM, PharmD., JD, MD, etc.)
- ○ Research Doctorate (PhD, EdD)
- ○ Additional undergraduate coursework to qualify for industry certification (e.g., CPA Exam)
- ○ Other, please define: _____

Please select the broad field and major of your graduate or professional study.
Broad field of study
Major
▼ Agriculture ... Visual and Performing Arts ~ Woodwind Instruments.
If the field and major of your graduate or professional study are not listed above, please list them here:

_____

Will you have a paid assistantship or fellowship?

- ○ Yes
- ○ No



Please indicate the primary reason(s) you are not seeking employment or continuing education at this time:

- [ ] Pursuing a gap year
- [ ] Raising a family
- [ ] Personal circumstances
- [ ] Experiential learning opportunity
- [ ] Other, please describe:

_____

Will you have an international residence?

- ○ Yes
- ○ No

Please provide your contact information after graduation.

- ○ Street address or P.O. box number:

_____

- ○ City or town: _____
- ○ Province/State/County: _____
- ○ Postal Code: _____
- ○ Email address (the email account you will check most often, non-Auburn.edu):

_____

- ○ Phone number: _____
- ○ LinkedIn URL (www.linkedin.com/in/_____):

_____



Please provide your contact information after graduation.

- ○ Street address: _____

- City: _____
- State: _____
- Zip code: _____
- Email address (the email account you will check most often, non-Auburn.edu):

_____

- Phone number: _____
- Linkedin URL (www.linkedin.com/in/_____):

_____

Additional Comments

Please add any additional comments you have below:

_____
_____
_____
_____
_____

**Appendix B**

# Campus Engagement and Experience Survey

***For best results, please use a computer to complete this survey.*** This survey is designed to collect information about your experiences as an Auburn University student. It should take no more than 15 minutes. Completion of this survey is one of four pre-graduation expectations associated with your UNIV-4AA0 Graduation Course and the AT Hold on your account. If you have any questions about this survey, please email the Office of Academic Assessment at assess@auburn.edu.

***War Eagle!***

Which of the following activities did you participate in while an Auburn University student? ***Please check all that apply.***

- ☐ Co-op
- ☐ ePortfolio
- ☐ Internship
- ☐ Study Abroad
- ☐ Undergraduate Research
- ☐ None

---

**Study Abroad**

The next set of questions will ask you about your study abroad experience. Please answer thoughtfully as you consider your experience(s) abroad.

Please identify the specific type of international experience that best describes your time abroad.

- ○ Co-op abroad
- ○ Internship/consulting project abroad
- ○ Study Abroad
- ○ Undergraduate Research Abroad
- ○ other _____

From the list below, please choose the type of study abroad program that best describes your experience.

- ○ AU Faculty led program involving medical shadowing or visits to companies (in my major)
- ○ AU Faculty led program with classes at universities and/or institutions abroad
- ○ AU Exchange program at university abroad
- ○ AU Service learning project abroad on non-credit program
- ○ Non-AU program abroad with another university or program for transfer credit
- ○ other _____

Please indicate your agreement (*1 - strongly disagree to 5 - strongly agree*) to the following statements about **Study Abroad**. ***Hover over the highlighted "?" for an additional description or example of the statement.***

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| There were appropriately high performance expectations during the Study Abroad experience. ***?*** | ○ | ○ | ○ | ○ | ○ |
| Effort was required over an extended period of time. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I interacted with faculty and peers while studying abroad. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I was exposed to people and/or settings that were unfamiliar to me. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I was provided with constructive feedback during my study abroad experience. ***?*** | ○ | ○ | ○ | ○ | ○ |
| There were structured opportunities to reflect on my learning. ***?*** | ○ | ○ | ○ | ○ | ○ |
| There was real-world application to my study abroad experience. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I orally presented about my study abroad experience. ***?*** | ○ | ○ | ○ | ○ | ○ |

How long was your program abroad?

- ○ 1-2 weeks
- ○ 3-8 weeks
- ○ one semester
- ○ longer than one semester

What motivated you to study abroad? (check all that apply)

- ☐ I wanted to study abroad since before I was in High School
- ☐ A faculty member at Auburn University encouraged me to study abroad
- ☐ To learn about a new culture
- ☐ to complete projects abroad in my academic major or field
- ☐ to explore other subjects not in my major that I was interested in
- ☐ to complete a minor abroad
- ☐ to complete core curriculum courses abroad
- ☐ to enhance my language skills
- ☐ to enhance my communication skills
- ☐ to experience life in another climate
- ☐ to meet experts in my field by visiting companies, medical entities in my field, expand my global network
- ☐ to meet students at universities abroad and compare best practices in my field
- ☐ to meet people like me
- ☐ to meet people that were not like me
- ☐ to learn more about people not like me

When did you study abroad?

- ○ freshmen or sophomore year
- ○ junior or senior year

Where did you study abroad (exclude travel off of program)?

- ○ Western Europe
- ○ Asia or Australia
- ○ Africa
- ○ Centra or South America
- ○ other _____

What did you get out of your study abroad program? (check all that apply)

- ☐ added an experience that made my resume stand out
- ☐ added a location that made my resume stand out
- ☐ added courses from an international university that made my resume stand out
- ☐ completed a minor or my major abroad
- ☐ grew my soft skills (such as the ability to understand cultural differences or listen more)
- ☐ learned a new language or improved my current language skills
- ☐ gained confidence to handle unfamiliar situations
- ☐ expanded global network of friends and/or contacts in my field
- ☐ provided me with opportunities to take the initiative and to handle new experiences
- ☐ learn more about myself (discovered my personal brand)
- ☐ received academic credit
- ☐ developed a global perspective

Please indicate, by selecting all that apply, the Exchange Programs in which you participated.

- [ ] Perth, Australia
- [ ] Aalen, Germany
- [ ] Karlsruhe, Germany
- [ ] Offenburg University, Germany
- [ ] Wurzburg-Schweinfurt, Germany
- [ ] Turin, Italy
- [ ] Tainan, Taiwan
- [ ] Other _____
- [ ] n/a

Please indicate, by selecting all that apply, the Faculty-led programs in which you participated.

- [ ] Beijing and Shangxi, China
- [ ] Wurzburg-Schweinfurt, Germany
- [ ] Florence, Italy
- [ ] Pamplona, Spain
- [ ] Other _____
- [ ] n/a

Please indicate, by selecting all that apply, the Service Programs in which you participated.

- [ ] EWB - Bolivia
- [ ] EWB - Rwanda
- [ ] Other _____
- [ ] n/a

**Co-op**

The next set of questions will ask you about your co-op experience(s). Please answer thoughtfully as you consider your experience(s) with co-op.

How many co-op employers did you have?

o 1

o 2 or more

You indicated that you participated in two or more co-op experiences

Please indicate your agreement (*1 - strongly disagree to 5 - strongly agree*) to the following statements about participating in an co-op. ***Hover over the highlighted "?" for an additional description or example of the statement.***

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| There were appropriately high performance expectations set for the co-op. ***?*** | ○ | ○ | ○ | ○ | ○ |
| Effort was required over an extended period of time. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I interacted with faculty and peers during and/or after my co-op. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I was exposed to people and/or settings that were unfamiliar to me. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I was provided with constructive feedback. ***?*** | ○ | ○ | ○ | ○ | ○ |
| There were structured opportunities to reflect on my learning. ***?*** | ○ | ○ | ○ | ○ | ○ |
| There was real-world application for the work I was completing during my co-op. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I was asked to demonstrate the learning that occurred during my co-op. ***?*** | ○ | ○ | ○ | ○ | ○ |

How many work terms did you complete with this employer?

- ○ 3
- ○ 4
- ○ 5

○ 6 or more

When did you participate in your co-op (select all that apply)?

- ☐ Fall, Freshman Year
- ☐ Spring, Freshman Year
- ☐ Summer, following Freshman Year
- ☐ Fall, Sophomore Year
- ☐ Spring, Sophomore Year
- ☐ Summer, following Sophomore Year
- ☐ Fall, Junior Year
- ☐ Spring, Junior Year
- ☐ Summer, following Junior Year
- ☐ Fall Senior Year
- ☐ Spring Senior Year
- ☐ Summer, following Senior Year
- ☐ Other (e.g. Fall 5th Year) _____

Please provide the following information about your co-op employer:

○ Employer's Name: _____

○ Employer's Location (e.g., New York, NY):
_____

○ Most frequent work location (e.g. Auburn, AL)
_____

○ Your Position Title: _____

○ Ending Salary: approximate hourly rate (0 if unpaid)
_____

Have you received an offer of employment from the organization with which you completed your co-op?

- ○ Yes
- ○ No

Have you accepted or plan to accept the offer of employment?

- ○ Yes
- ○ No

The College of Engineering has a few additional questions about your co-op experience. Please respond to the following questions about your most relevant co-op Experience.

How did you learn about this opportunity?

- ○ Career fair
- ○ Career Center / co-op Office
- ○ Department / professor
- ○ Family / friend
- ○ Handshake
- ○ Other _____

Rate the quality of this experience

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I had a good experience in this position | ○ | ○ | ○ | ○ | ○ |
| My responsibilities were related to my field of study | ○ | ○ | ○ | ○ | ○ |
| I would recommend this experience to a peer | ○ | ○ | ○ | ○ | ○ |

Why would you recommend this experience to a peer?

_____

Why would you not recommend this experience to a peer?

**ePortfolio**

The next set of questions will ask you about your experience(s) with ePortfolios. For the purpose of the following survey questions, please consider ePortfolios to be professional websites that include documentation of your skills and experiences accompanied by writing that provides the context of those documents so that others can understand why you have included those examples.

Please indicate your agreement (*1 - strongly disagree to 5 - strongly agree*) to the following statements about creating an **ePortfolio**. ***Hover over the highlighted "?" for an additional description or example of the statement.***

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| The expectations for my performance in the ePortfolio were appropriately high. ***?*** | ○ | ○ | ○ | ○ | ○ |
| Creating my ePortfolio required a significant investment of effort across an extended period of time. ***?*** | ○ | ○ | ○ | ○ | ○ |
| Working on my ePortfolio created opportunities for meaningful interactions with faculty and/or peers. ***?*** | ○ | ○ | ○ | ○ | ○ |
| Creating my ePortfolio gave me an opportunity to communicate what I have learned about perspectives and cultures that are different from my own. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I received feedback from faculty and/or peers while creating my ePortfolio. ***?*** | ○ | ○ | ○ | ○ | ○ |
| Working on my ePortfolio included opportunities to reflect on my learning. ***?*** | ○ | ○ | ○ | ○ | ○ |
| There are/were real-world applications for my ePortfolio. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I demonstrated the learning experienced while creating my ePortfolio by sharing it with others. ***?*** | ○ | ○ | ○ | ○ | ○ |

To complete my ePortfolio I (select all that apply)

- ☐ Worked on it in more than one course
- ☐ Worked on it in more than one semester
- ☐ Created different versions for different purposes
- ☐ Had opportunities to practice components (like making design choices or reflecting on my experiences) before assembling the final ePortfolio
- ☐ Got feedback from an industry representative or potential employer in my field

There were real-world applications for my ePortfolio because I used it to (select all that apply)

- ☐ demonstrate skills and experiences to potential employers
- ☐ demonstrate skills and experiences to graduate or professional schools
- ☐ record my experiences with another High Impact Practice (such as internships, study abroad, undergraduate research)
- ☐ other _____

Creating my ePortfolio gave me practical experience with (select all that apply)

- ☐ technology I might not otherwise have encountered
- ☐ making ethical choices
- ☐ visual literacy
- ☐ synthesizing my experiences
- ☐ explaining my experiences and choices to others
- ☐ considering audience and purpose
- ☐ selecting the best artifacts of my knowledge, skills and/or abilities from among many possibilities

Overall, was the experience of creating an ePortfolio meaningful to you?

- ○ Yes
- ○ No

Was completing an ePortfolio required in your major?

- ○ Yes
- ○ No

Did you participate in programs offered by Auburn's ePortfolio Project?

- ○ Yes
- ○ No

**Internship**

The next set of questions will ask you about your internship experience(s). Please answer thoughtfully as you consider your internship(s).

How many internships did you participate in?

- ○ 1
- ○ 2
- ○ 3 or more

You indicated that you participated in more than one internship. Please respond to the next set of questions about your most relevant internship experience.

Please indicate your agreement (*1 - strongly disagree to 5 - strongly agree*) to the following statements about participating in an **Internship**. ***Hover over the highlighted "?" for an additional description or example of the statement.***

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| There were appropriately high performance expectations set for the Internship. ***?*** | ○ | ○ | ○ | ○ | ○ |
| Effort was required over an extended period of time. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I interacted with faculty and peers during and/or after my internship. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I was exposed to people and/or settings that were unfamiliar to me. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I was provided with constructive feedback. ***?*** | ○ | ○ | ○ | ○ | ○ |
| There were structured opportunities to reflect on my learning. ***?*** | ○ | ○ | ○ | ○ | ○ |
| There was real-world application for the work I was completing during my internship. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I orally presented about my internship experience. ***?*** | ○ | ○ | ○ | ○ | ○ |

Please describe the amount of time you spent on your internship/work experience:

○ Approximate hours per week _____

○ Number of weeks _____

When did you participate in your internship (select all that apply)?

- ☐ Fall, Freshman Year
- ☐ Spring, Freshman Year
- ☐ Summer, following Freshman Year
- ☐ Fall, Sophomore Year
- ☐ Spring, Sophomore Year
- ☐ Summer, following Sophomore Year
- ☐ Fall, Junior Year
- ☐ Spring, Junior Year
- ☐ Summer, following Junior Year
- ☐ Fall Senior Year
- ☐ Spring Senior Year
- ☐ Summer, following Senior Year
- ☐ Other (e.g. Fall 5th Year) _____

Was your internship paid or for course credit (select all that apply)?

- ☐ paid
- ☐ credit
- ☐ neither paid nor for credit

Have you received an offer of employment from the organization with which you completed your Internship?

- ○ yes
- ○ no

Have you accepted or plan to accept the offer of employment?

- ○ yes
- ○ no

Please provide the following information about your employer:

- ○ Employer's Name: _____
- ○ Employer's Location (e.g. Auburn, AL):
_____
- ○ Work site location (e.g. Auburn, AL) _____
- ○ Your Position Title: _____
- ○ Salary: approximate hourly rate (0 if unpaid)
_____

The College of Engineering has a few additional questions about your Internship experience. Please respond to the following questions about your most relevant Internship Experience.

How did you learn about this opportunity?

- ○ Career fair
- ○ Career Center / Co-op Office
- ○ Department / professor
- ○ Family / friend
- ○ Handshake
- ○ Other _____

Rate the quality of you most relevant internship experience.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I had a good experience in this position | ○ | ○ | ○ | ○ | ○ |
| My responsibilities were related to my field of study | ○ | ○ | ○ | ○ | ○ |
| I would recommend this experience to a peer | ○ | ○ | ○ | ○ | ○ |

Why would you recommend this experience to a peer?

_____
_____
_____
_____
_____

Why would you not recommend this experience to a peer?

_____
_____
_____
_____
_____

**Undergraduate Research**

The next set of questions will ask you about your Undergraduate Research experience. Please answer thoughtfully as you consider your experience(s) with Undergraduate Research.

Please indicate your agreement (*1 - strongly disagree to 5 - strongly agree*) to the following statements about **Undergraduate Research**. ***Hover over the highlighted "?" for an additional description or example of the statement.***

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| There were appropriately high performance expectations set for my Undergraduate Research experience. ***?*** | ○ | ○ | ○ | ○ | ○ |
| Effort was required over an extended period of time. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I interacted with faculty and peers while participating in undergraduate research. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I was exposed to people and/or settings that were unfamiliar to me. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I was provided with constructive feedback. ***?*** | ○ | ○ | ○ | ○ | ○ |
| There were structured opportunities to reflect on my learning. ***?*** | ○ | ○ | ○ | ○ | ○ |
| There was real-world application to the work I was completing during my undergraduate research experience. ***?*** | ○ | ○ | ○ | ○ | ○ |
| I orally presented about my undergraduate research experience and/or presented research completed while completing undergraduate research. ***?*** | ○ | ○ | ○ | ○ | ○ |

Why did you participate in Undergraduate Research? (check all that apply)

- ☐ for credit in a course offered by my department or another department
- ☐ during an internship
- ☐ as part of an Undergraduate Research Fellowship
- ☐ as a volunteer researcher
- ☐ as a student employee
- ☐ Research Experience for Undergraduates (REU) - please indicate institution _____
- ☐ Summer research at government laboratory - please indicate the laboratory _____
- ☐ other _____

Were you an author or co-author on an academic publication or did you contribute to a professional publication in relation to your undergraduate experience?

- ○ Yes
- ○ No
- ○ other _____

How many publications did you author/co-author?

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5 or more

From the list below, please indicate how undergraduate research had a personal impact on you. (check all that apply)

- [ ] My research experience made me feel like I belonged to a community of scholars.
- [ ] My ability to communicate improved as a result of my undergraduate research experience.
- [ ] I learned how to persevere through obstacles and setbacks in my research
- [ ] My research experience helped me clarify my career goals
- [ ] My research experience made me more competitive for the job market, graduate school admission and/or admission to professional school

**Work**

Previous questions asked you about participation in a set of high impact educational practices. This next question will ask you about one specific Peak Educational Moment.

In a few sentences, describe a transformative learning experience, while a student at Auburn University, that helped shape the person you are today (a short experience that was both memorable and meaningful). Please be descriptive and note that the moment could take place anywhere (classroom, internship, study abroad, work, athletics, fraternity/sorority, student government, etc.).

_____
_____
_____
_____
_____

The next set of questions will ask about any other on- or off-campus employment or work experience.

Did you work (part-time, full-time, work study) while an Undergraduate Student at Auburn University (check all that apply) ?

- ☐ Yes
- ☐ No
- ☐ Other _____

In which setting were you employed?

- ☐ On-campus
- ☐ Off-campus
- ☐ Other _____

How many hours per week did you work?

- ○ Less than 5 hours
- ○ 5-10 hours
- ○ 10-15 horus
- ○ 15-20 hours
- ○ 20-25 hours
- ○ more than 25 hours

**AR**

The next set of questions will ask about your experiences as a student in the College of Architecture, Design & Construction (CADC). Please take your time and provide thoughtful responses to each question. The data collected will be used for ongoing improvement of the program/college and for the continuation of professional accreditation.

What is your overall satisfaction with the education you received in the College of Architecture, Design & Construction (CADC) at Auburn?

- ○ Extremely dissatisfied
- ○ Somewhat dissatisfied
- ○ Neither satisfied nor dissatisfied
- ○ Somewhat satisfied
- ○ Extremely satisfied

How well did your education in the CADC prepare you for your future career?

- ○ Not well at all
- ○ Slightly well
- ○ Moderately well
- ○ Very well
- ○ Extremely well
- ○ I do not plan to use my degree in my future career.

What was the best course you took in your MAJOR?

Why was it the best? Select all that apply.

- [ ] Strength of faculty
- [ ] Skills taught
- [ ] Provided real world experience
- [ ] Prepared you for future career
- [ ] Personal enjoyment
- [ ] Teaching methods use in class
- [ ] Innovative use of technology
- [ ] Other (please specify) _____

What was the worst course you took in your MAJOR, and why was it the worst?

Did you change your MAJOR during your time at Auburn?

- ○ Yes
- ○ No

What was your initial major?

- ○ Building Science
- ○ Environmental Design
- ○ Industrial Design
- ○ Graphic Design
- ○ Engineering
- ○ Architecture
- ○ Business
- ○ Other (please specify) _____

How did you select your final MAJOR at Auburn?

- ○ Advice/experience of family and friends
- ○ High school counselor/advisor
- ○ College counselor/advisor
- ○ Quality of program
- ○ Job placement/prospects
- ○ Internship experience
- ○ Personal interest
- ○ Other (please specify) _____

What is the one thing you wish you were told prior to starting your program in the CADC?

_____

Please use the following scale (1-not at all useful to 5-extremely useful) to rate the effectiveness of the following services:

| | Not at all useful | Slightly useful | Moderately useful | Very useful | Extremely useful |
|---|---|---|---|---|---|
| Student Recruitment | ○ | ○ | ○ | ○ | ○ |
| Student Advising | ○ | ○ | ○ | ○ | ○ |
| Student activities within the school | ○ | ○ | ○ | ○ | ○ |
| School's relationship with industry | ○ | ○ | ○ | ○ | ○ |
| School's physical facility | ○ | ○ | ○ | ○ | ○ |
| School's career services | ○ | ○ | ○ | ○ | ○ |
| School's IT services | ○ | ○ | ○ | ○ | ○ |

**AR_DESIGN**

What was the best overall course you took at Auburn University? If the same as the best course in your major, please put N/A.

_____

If different than the best course in your major, why was it the best overall course?

_____

What was the worst overall course you took at Auburn University? If the same as the worst course in your major, please put N/A.

_____

If the worst overall course is different than the worst course in your major, why was it the worst?

_____

What was the best community experience you had at Auburn?

_____

Why was it the best community experience?

_____

What was the worst community experience you had at Auburn?

_____

Why was it the worst community experience?

_____

Please provide any additional comments you would like the College of Architecture, Design & Construction to know about your educational experience.

**AR_BSCI**

Please list the strengths of the Building Science program. Select all that apply:

- ☐ Class size
- ☐ Field Lab
- ☐ Active Learning class spaces
- ☐ Computer Labs
- ☐ Thesis Labs
- ☐ Real world learning applications (i.e. site visits, service learning, etc.)
- ☐ Industry collaboration/connections
- ☐ Career preparation and placement
- ☐ Faculty dedication and ability
- ☐ Faculty connections to industry
- ☐ Facilities and technology used
- ☐ Curriculum and quality/relevance of courses
- ☐ Other (please specify) _____

Please list any areas needing improvements in the Building Science program.

Below are specific and general subject areas that you took while enrolled in the BSCI program. Please rate the value of each area to your educational experience.

| | Not valuable at all | Seldom valuable | Somewhat valuable | Valuable | Highly valuable |
|---|---|---|---|---|---|
| BSCI 1100 - Introduction to Construction | ○ | ○ | ○ | ○ | ○ |
| BSCI 2200 - Construction Documents | ○ | ○ | ○ | ○ | ○ |
| BSCI 2300 - Construction Methods and Materials | ○ | ○ | ○ | ○ | ○ |
| BSCI 2400 - Structures of Buildings I | ○ | ○ | ○ | ○ | ○ |
| BSCI 3200 - Construction Communication | ○ | ○ | ○ | ○ | ○ |
| BSCI 3300 - Field Surveying | ○ | ○ | ○ | ○ | ○ |
| BSCI 3440 - Structures of Buildings II | ○ | ○ | ○ | ○ | ○ |
| BSCI 3500 - Construction Information Technology I | ○ | ○ | ○ | ○ | ○ |
| BSCI 3600 - Construction Estimating | ○ | ○ | ○ | ○ | ○ |
| BSCI 3660 - Pre-Construction and Project Management | ○ | ○ | ○ | ○ | ○ |
| BSCI 3700 - Construction Safety | ○ | ○ | ○ | ○ | ○ |
| BSCI 3800 - Contracting Business | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| BSCI 4350 - Construction Project Analysis | ○ | ○ | ○ | ○ | ○ |
| BSCI 4360 - Construction Field Lab | ○ | ○ | ○ | ○ | ○ |
| BSCI 4500 - Construction Information Technology II | ○ | ○ | ○ | ○ | ○ |
| BSCI 4610 - Scheduling and Field Operations | ○ | ○ | ○ | ○ | ○ |
| BSCI 4700 - Mechanical Systems in Buildings | ○ | ○ | ○ | ○ | ○ |
| BSCI 4750 - Electrical Systems in Buildings | ○ | ○ | ○ | ○ | ○ |
| BSCI 4850 - Construction Law and Risk Management | ○ | ○ | ○ | ○ | ○ |
| BSCI 4990 - Thesis | ○ | ○ | ○ | ○ | ○ |
| BSCI Electives | ○ | ○ | ○ | ○ | ○ |
| English Composition | ○ | ○ | ○ | ○ | ○ |
| Calculus I | ○ | ○ | ○ | ○ | ○ |
| World History | ○ | ○ | ○ | ○ | ○ |
| Philosophy | ○ | ○ | ○ | ○ | ○ |
| Fine Arts | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| Literature | ○ | ○ | ○ | ○ | ○ |
| Physics | ○ | ○ | ○ | ○ | ○ |
| Business Law | ○ | ○ | ○ | ○ | ○ |
| Economics | ○ | ○ | ○ | ○ | ○ |
| Accounting | ○ | ○ | ○ | ○ | ○ |
| Public Speaking | ○ | ○ | ○ | ○ | ○ |
| Management | ○ | ○ | ○ | ○ | ○ |

Our accreditation agency, The American Council for Construction Education, has established learning outcomes that set out what you should be able to do upon graduation. On a scale of 1 to 5, rate how strongly you agree or disagree that you have achieved the following outcomes:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| Create written communications appropriate to the construction discipline | ○ | ○ | ○ | ○ | ○ |
| Create oral presentations appropriate to the construction discipline | ○ | ○ | ○ | ○ | ○ |
| Create a construction project safety plan | ○ | ○ | ○ | ○ | ○ |
| Create a construction project cost estimate | ○ | ○ | ○ | ○ | ○ |
| Create a construction project schedule | ○ | ○ | ○ | ○ | ○ |
| Analyze professional decisions based on ethical principles | ○ | ○ | ○ | ○ | ○ |
| Analyze construction documents for planning and management of construction processes | ○ | ○ | ○ | ○ | ○ |
| Analyze methods, materials, and equipment used to construct projects | ○ | ○ | ○ | ○ | ○ |
| Apply construction management skills as a member of a multidisciplinary team | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| Apply electronic-based technology to manage the construction process | ○ | ○ | ○ | ○ | ○ |
| Apply basic surveying techniques for construction layout and control | ○ | ○ | ○ | ○ | ○ |
| Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process | ○ | ○ | ○ | ○ | ○ |
| Understand construction risk management | ○ | ○ | ○ | ○ | ○ |
| Understand construction accounting and cost control | ○ | ○ | ○ | ○ | ○ |
| Understand construction quality assurance and control | ○ | ○ | ○ | ○ | ○ |
| Understand construction project control processes | ○ | ○ | ○ | ○ | ○ |
| Understand the legal implications of contract, common, and regulatory law to manage a construction project | ○ | ○ | ○ | ○ | ○ |
| Understand the basic principles of sustainable construction | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| Understand the basic principles of structural behavior | ○ | ○ | ○ | ○ | ○ |
| Understand the basic principles mechanical, electrical, and piping systems | ○ | ○ | ○ | ○ | ○ |

The McWhorter School strives to provide an Enriching Educational Experience for Building Science students by providing a number of opportunities for students outside of the classroom. The following questions inquire about your participation in Enriching Educational Experiences: (Please check yes or no for each of the activities!)

| | Yes | No |
|---|---|---|
| service-learning as part of a BSCI class | ○ | ○ |
| study abroad program or international experience as part of the BSCI program | ○ | ○ |
| student competition while you were in the BSCI program | ○ | ○ |
| ePortfolio while in the BSCI program | ○ | ○ |
| industry internship or co-op while in the BSCI program | ○ | ○ |

The McWhorter School strives to prepare and provide assistance for all students to obtain entry-level positions across diverse sectors of the construction industry. The following questions

inquire about how the school provided assistance to you in obtaining employment: (Please check yes or no for each of teh support options).

| | Yes | No |
|---|---|---|
| Did you seek advisement through the BSCI Career Office? | ○ | ○ |
| Did you seek resume assistance from the BSCI Career Office? | ○ | ○ |
| Did you attend an information session? | ○ | ○ |
| Did you obtain an on-campus interview with a company following an information session or the Career Fair? | ○ | ○ |
| Did you attend a BSCI Career Fair? | ○ | ○ |

Please provide any additional comments you would like the CADC to know about your educational experience.

_____

**CLA**

The next set of questions will ask you to reflect on your time as a student in the College of Liberal Arts. Your participation is appreciated and serves as a crucial part of fostering the future success of the students in the College of Liberal Arts (CLA). Please answer the items to the best of your ability -- the remaining questions of this survey should take approximately 10 - 15 minutes.

Thank you and War Eagle!

As a student, you have gained familiarity with factual information, concepts, and theory related to your field of study. This knowledge may come through observation, experience, or study, and can be transferred from one person to another. ***Please describe concisely the most important and relevant knowledge you have gained while earning your Auburn Liberal Arts degree:***

_____
_____
_____
_____
_____

During your college studies, you have been developing skills in your academic discipline (e.g., major). If knowledge is what you know, skills allow you to apply what you know to a particular situation or problem. ***Please describe concisely the most important and relevant skills you have developed while earning your Auburn Liberal Arts degree:***

_____
_____
_____
_____
_____

Imagine you are in an interview (for a job or for graduate school). ***How can you use your Liberal Arts degree to help explain why you will be successful in your career?***

_____
_____
_____
_____
_____

The following items ask how confident you feel in your ability to use the skills and knowledge gained through your liberal arts degree. Please read each item and respond according to how you

feel at this current moment. Answer as honestly as possible, responding on a scale of 1 (strongly disagree) to 5 (strongly agree).

| | 1-Strongly disagree | 2-Disagree | 3-Neither agree nor disagree | 4-Agree | 5-Strongly agree |
|---|---|---|---|---|---|
| I am confident that I can use the skills and knowledge gained from my liberal arts degree in the future. | ○ | ○ | ○ | ○ | ○ |
| I am confident that I can use the skills and knowledge gained from my liberal arts degree in job interviews. | ○ | ○ | ○ | ○ | ○ |
| I am confident that I can use the skills and knowledge gained from my liberal arts degree for career success. | ○ | ○ | ○ | ○ | ○ |

The following items ask how much control you believe you have over your college career. Answer as honestly as possible, responding on a scale of 1 (strongly disagree) to 5 (strongly agree).

| | 1-Strongly Disagree | 4-Disagree | 3-Neither Agree nor Disagree | 4-Agree | 5-Strongly Agree |
|---|---|---|---|---|---|
| I have a great deal of control over my academic performance in my college courses. | ○ | ○ | ○ | ○ | ○ |
| The more effort I put into my academic courses, the better I do in them. | ○ | ○ | ○ | ○ | ○ |
| No matter what I do, I can't seem to do well in my courses. | ○ | ○ | ○ | ○ | ○ |
| I see myself as largely responsible for my performance throughout my college career. | ○ | ○ | ○ | ○ | ○ |
| How well I do in my courses is often "luck of the draw." | ○ | ○ | ○ | ○ | ○ |
| There is little I can do about my performance in college. | ○ | ○ | ○ | ○ | ○ |
| When I do poorly in a course, it's usually because I haven't given it my best effort. | ○ | ○ | ○ | ○ | ○ |
| My grades are basically determined by things beyond my control, and there is little I can do to change that. | ○ | ○ | ○ | ○ | ○ |

**Please respond to the following items pertaining to your experiences with academic advising and related resources in the College of Liberal Arts.**

Using the list below, please select your College of Liberal Arts Students Services (CLASS) advisor:

▼

The following items are asking you to rate your level of comfort with your CLA academic advisor. Please read each item carefully and respond according to how you feel at this current moment. Answer as honestly as possible, responding on a scale of 1 (strongly disagree) to 4 (strongly agree).

| | 1 - Strongly Disagree | 2 - Disagree | 3 - Agree | 4 - Strongly Agree |
|---|---|---|---|---|
| I feel comfortable talking to my CLA Academic Advisor. | ○ | ○ | ○ | ○ |
| My CLA Academic Advisor provides a caring, open atmosphere. | ○ | ○ | ○ | ○ |
| My CLA Academic Advisor listens to me. | ○ | ○ | ○ | ○ |
| I feel comfortable contacting my CLA Advisor. | ○ | ○ | ○ | ○ |

Aubie is a student at Auburn University and needs to complete the following tasks; unfortunately, Aubie does not know where to go. Please help Aubie by selecting the appropriate resource to complete each task (one selection per task).

*Where should Aubie go in order to…*

| | Faculty Advisor or Departmental Advisor | Med Clinic or Student Counseling Services | AU Career Center or Academic Support | The Writing Center | Registrar's Office |
|---|---|---|---|---|---|
| …sign-up for tutoring with a study partner? | ○ | ○ | ○ | ○ | ○ |
| …first, to discuss specific course material and content as they relate to Aubie's major? | ○ | ○ | ○ | ○ | ○ |
| …take interests and personality assessments? | ○ | ○ | ○ | ○ | ○ |
| …get help reviewing and editing an academic paper? | ○ | ○ | ○ | ○ | ○ |
| …for help if he notices a friend who seems persistently sad and less engaged | ○ | ○ | ○ | ○ | ○ |
| …obtain transient approval (i.e., official permission to take courses at another university)? | ○ | ○ | ○ | ○ | ○ |

Please respond to the following items pertaining to your experiences with Career events and related resources in the College of Liberal Arts.

Starting with your top choice, please identify three geographic areas (state and corresponding city/town) in which you most desire to work and/or live after graduation:

| | Preferred State | City/Town |
|---|---|---|
| | | (Text Entry) |
| 1-Top Choice | ▼ International (Outside of U.S.) ... Wyoming | |
| 2-Second Choice | ▼ International (Outside of U.S.) ... Wyoming | |
| 3-Third Choice | ▼ International (Outside of U.S.) ... Wyoming | |

On average, how often did you participate in the following list of Career Service Events offered by the College of Liberal Arts?

| | 1<br>Never | 2<br>Sometimes | 3<br>About half the time | 4<br>Most of the time | 5<br>Always |
|---|---|---|---|---|---|
| Career Fairs | ○ | ○ | ○ | ○ | ○ |
| Employer Information Sessions | ○ | ○ | ○ | ○ | ○ |
| Workshops | ○ | ○ | ○ | ○ | ○ |
| Career/Employer Class Presentations | ○ | ○ | ○ | ○ | ○ |
| One-on-One Career Advising | ○ | ○ | ○ | ○ | ○ |

Among the following list of Career Service Events that you remember attending, please rank up to THREE (3) activities that you found most helpful to your preparation for post-graduation pursuits (e.g., employment, graduate school, etc.):

Top 3 Most Helpful Activities (1=Most Helpful)

_____ Career Fairs

_____ Employer Information Sessions

_____ Workshops

_____ Career/Employer Class Presentations

_____ One-on-One Career Advising

Based on your top choice from the previous question, please briefly explain how this Career Service event/activity was most helpful in preparing you for your post-graduation pursuits:

_____

_____

_____

**SFWS**

The next set of questions will ask about your experiences as a student in the School of Forestry and Wildlife Sciences, specifically.

Regarding your undergraduate advising at the School of Forestry and Wildlife Sciences (SFWS), did you meet most often with your faculty advisor or student services advisor?

- ○ Faculty Advisor
- ○ Student Services Office Advisor

On a scale of 1-5, please rate your faculty advising experience with the School of Forestry and Wildlife Sciences.

- ○ Extremely bad
- ○ Somewhat bad
- ○ Neither good nor bad
- ○ Somewhat good
- ○ Extremely good

Keeping in mind that you were once a Freshman (OMG, what is going on?) and are now a Senior and about to graduate (I've got this), please rank the following statement: "I was satisfied with the undergraduate student advising process while I was attending the School of Forestry and Wildlife Sciences."

- ○ Strongly disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

For students in Forestry (FORY) or Wildlife Ecology (WLDE) majors, please rate the level and complexity of the material you were exposed to during summer practicum. Was it:

- ○ about the right about or presented at the appropriate level
- ○ too much material and/or too difficult material
- ○ not enough material presented and/or presented at a level that was too elementary

On a scale of 1-strongly disagree to 5-strongly agree, please rate the following statements about the knowledge, skills, and techniques covered during the Summer Practicum portion of the curriculum:

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| ...was worth my time. | ○ | ○ | ○ | ○ | ○ |
| ...was worth my effort. | ○ | ○ | ○ | ○ | ○ |
| ...was worth my expense. | ○ | ○ | ○ | ○ | ○ |

During your time at Auburn did you utilize or participate in the following activities sponsored by the School of Forestry and Wildlife Sciences? Please indicate by checking yes or no.

| | yes | no |
|---|---|---|
| Career Fair | ○ | ○ |
| Career Development Workshops (Resume Workshops, Undergraduate Research Info Session, Soft Skills, etc.) | ○ | ○ |
| Weaver Seminar Series | ○ | ○ |
| On-Campus Interviews | ○ | ○ |
| Wednesday Research Seminar Series | ○ | ○ |

During your time at Auburn did you utilize or participate in the following School of Forestry and Wildlife Sciences Clubs or Organizations?

| | yes | no |
|---|---|---|
| Student Government Association | ○ | ○ |
| Student Ambassadors | ○ | ○ |
| Forestry Club | ○ | ○ |
| Wildlife Society | ○ | ○ |
| The Society of Natural Resources | ○ | ○ |
| Geospatial Club | ○ | ○ |
| MANNR's | ○ | ○ |
| Wildland Fire Club | ○ | ○ |

During your time at Auburn did you participate in any of the following activities?

| | yes | no |
|---|---|---|
| held an officer position | ○ | ○ |
| attended a professional conference as a member of the organization | ○ | ○ |
| participated in a team competition | ○ | ○ |
| attended the SFWS sponsored events: Ice Breaker, Homecoming BBQ, etc. | ○ | ○ |
| Participated in a Club hosted Philanthropic Event | ○ | ○ |
| Engaged with Industry Professionals | ○ | ○ |

Please indicate how adequately prepared for the workforce you are with regards to, LEADERSHIP, based off your experience in the School of Forestry and Wildlife Sciences.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I have the ability to think strategically. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to recognize when to lead and when to follow. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to deal with conflict. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to motivate others. | ○ | ○ | ○ | ○ | ○ |

Please indicate how adequately prepared for the workforce you are with regards to, PROFESSIONALISM, based off your experience in the School of Forestry and Wildlife Sciences.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I have the ability to accept criticism. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to take direction from others. | ○ | ○ | ○ | ○ | ○ |
| I am trustworthy with sensitive information. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to maintain appropriate decorum and demeanor. | ○ | ○ | ○ | ○ | ○ |

Please indicate how adequately prepared for the workforce you are with regards to, TEAMWORK, based off your experience in the School of Forestry and Wildlife Sciences.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I am a productive team member. | ○ | ○ | ○ | ○ | ○ |
| I am punctual and meet deadlines. | ○ | ○ | ○ | ○ | ○ |
| I am accountable to the team. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to share ideas to multiple audiences. | ○ | ○ | ○ | ○ | ○ |

Please indicate how adequately prepared for the workforce you are with regards to, SELF-MANAGEMENT, based off your experience in the School of Forestry and Wildlife Sciences.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I have effective work habits. | ○ | ○ | ○ | ○ | ○ |
| I have efficient work habits. | ○ | ○ | ○ | ○ | ○ |
| I am a self-starter. | ○ | ○ | ○ | ○ | ○ |
| I work well under pressure. | ○ | ○ | ○ | ○ | ○ |

Please indicate how adequately prepared for the workforce you are with regards to, DECISION MAKING & PROBLEM-SOLVING, based off your experience in the School of Forestry and Wildlife Sciences.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I have the ability to identify and analyze problems. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to understand the effects of my decisions. | ○ | ○ | ○ | ○ | ○ |

Please indicate how adequately prepared for the workforce you are with regards to, COMMUNICATION SKILL, based off your experience in the School of Forestry and Wildlife Sciences.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I have the ability to listen effectively to others around me. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to communicate accurately to others. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to communicate concisely to others. | ○ | ○ | ○ | ○ | ○ |

How important is writing to the scholarly and professional work done in your major?

- ○ Extremely important
- ○ Very important
- ○ Moderately important
- ○ Slightly important
- ○ Not at all important

I feel prepared to meet the writing demands I expect to encounter during my career.

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

To what degree are you satisfied with the overall quality of writing instruction you received in your major?

- ○ Very satisfied
- ○ Satisfied
- ○ Neither satisfied nor unsatisfied
- ○ Unsatisfied
- ○ Very unsatisfied
- ○ N/A

How much consistency in approaches to writing assignments and writing instruction do you notice among courses in your major?

- ○ A great deal
- ○ A lot
- ○ A moderate amount
- ○ A little
- ○ None at all

Is there anything else you would like to tell us about your experience as a student in the School of Forestry and Wildlife Sciences?

_____
_____
_____
_____
_____

**HCOB**

The next set of questions will ask you about your experiences as a student in the Harbert College of Business, specifically.

If you had a business minor, what program was it in?

▼ Accountancy (ACCT) ... Supply Chain Management (SCMN)

Do you plan to continue your education once you graduate from Auburn University (e.g. Master of Accountancy, Master of Business Administration, Juris Doctor, Additional hours for the CPA exam, etc.)?

- ○ Yes
- ○ No

Though you plan to enroll in a graduate or professional degree program shorty after graduation, have you already secured a job to begin following graduate school?

- ○ Yes
- ○ No

The Harbert College of Business has a few additional questions about internships that they would like to ask. Please answer the following questions to the best of your ability.

Did you have multiple academic internships and/or other similar work experiences related to your academic studies?

- ○ Yes
- ○ No

Please report the following information for the academic internship or other similar work experience *most relevant* to your academic studies.

Please select the job function that best describes your position:

▼ Accounting ... Other

Please select the primary industry of your employer:

▼ Accounting ... Other

Please select the geographic region in which you completed your internship or similar work experience:

▼ U.S. Northeast (ME, VT, NY, NJ, CT, MA, NH, RI) ... Destination not yet determined

Did you decline a paid internship offer during your college career?

- ○ Yes
- ○ No

Which of the following were major factors in why you declined a paid internship offer (choose all that apply)?

- ☐ Location
- ☐ Compensation
- ☐ Housing
- ☐ Nature of work
- ☐ Accepted another offer
- ☐ Other _____

As you reflect on how well your Harbert College of Business education has prepared you for the business world, please rate ***your knowledge of*** ...

| | Poor | Fair | Good | Exemplary |
|---|---|---|---|---|
| fundamental ***accounting*** concepts | ○ | ○ | ○ | ○ |
| fundamental ***finance*** concepts | ○ | ○ | ○ | ○ |
| fundamental ***management*** concepts | ○ | ○ | ○ | ○ |
| fundamental ***marketing*** concepts | ○ | ○ | ○ | ○ |
| the ethical responsibilities of business | ○ | ○ | ○ | ○ |
| the legal responsibilities of business | ○ | ○ | ○ | ○ |
| diversity and multicultural issues affecting businesses | ○ | ○ | ○ | ○ |

As you reflect on how well your Harbert College of Business education has prepared you for the business world, please rate ***your ability to*** ...

| | Poor | Fair | Good | Exemplary |
|---|---|---|---|---|
| use technology to analyze business data | ○ | ○ | ○ | ○ |
| use technology to present business information for decision-making | ○ | ○ | ○ | ○ |
| gather relevant information to address a business problem or opportunity | ○ | ○ | ○ | ○ |
| analyze information I have gathered | ○ | ○ | ○ | ○ |
| develop conclusions/recommendations for a business problem/opportunity | ○ | ○ | ○ | ○ |
| write a paper in a concise, logical order | ○ | ○ | ○ | ○ |
| support my paper's message with sound arguments | ○ | ○ | ○ | ○ |
| write my paper professionally, including proper grammar, formatting, and tone | ○ | ○ | ○ | ○ |
| deliver an effective, well-organized oral presentation | ○ | ○ | ○ | ○ |
| deliver a professional oral presentation with appropriate audience interaction, design of visuals, and attire | ○ | ○ | ○ | ○ |
| provide and explain supporting arguments with necessary analysis | ○ | ○ | ○ | ○ |
| work reliably in a team through attendance, punctuality, respect for deadlines, etc. | ○ | ○ | ○ | ○ |
| be willing to take a fair share of team tasks | ○ | ○ | ○ | ○ |

| | | | | |
|---|---|---|---|---|
| show respect for other team members | ○ | ○ | ○ | ○ |

As you reflect on how well your Harbert College of Business- School of Accountancy education has prepared you for the business world, please rate your ability to ...

| | Poor | Fair | Good | Exemplary |
|---|---|---|---|---|
| Demonstrate technical competency in financial accounting | ○ | ○ | ○ | ○ |
| Demonstrate technical competency in tax accounting | ○ | ○ | ○ | ○ |
| Demonstrate technical competency in auditing | ○ | ○ | ○ | ○ |
| Use technology to gather and/or organize data | ○ | ○ | ○ | ○ |
| Demonstrate knowledge of professional responsibilities and conduct | ○ | ○ | ○ | ○ |
| Apply knowledge of professional responsibilities and conduct to ethical dilemmas | ○ | ○ | ○ | ○ |

Please rate the extent to which you used, participated in, and/or attended the following non-class activities and resources provided by the Harbert College:

| | Never | Occasionally | Regularly |
|---|---|---|---|
| Office of Academic Advising | ○ | ○ | ○ |
| Office of Professional and Career Development | ○ | ○ | ○ |
| TIGER Lab | ○ | ○ | ○ |
| Faculty office hours | ○ | ○ | ○ |
| Business student organizations | ○ | ○ | ○ |
| Business guest speakers | ○ | ○ | ○ |
| College events such as Business Bash, Majors Fair, lunch on the front lawn, etc. | ○ | ○ | ○ |
| Career Fairs | ○ | ○ | ○ |

Overall, how ***satisfied*** are you with your experience in the Harbert College of Business?

- ○ Very Satisfied
- ○ Somewhat Satisfied
- ○ Neither Satisfied or Dissatisfied
- ○ Somewhat Dissatisfied
- ○ Very Dissatisfied

**ENG**

The next set of questions will ask you to reflect on your experience(s) as a student in the College of Engineering.

In which of the following did you participate (check all that apply)

- ☐ Student organization
- ☐ Extracurricular engineering team

In which engineering student organizations did you participate? (check all that apply)

- ☐ AL Water Environment Federation (WEF)
- ☐ Alpha Epsilon
- ☐ Alpha Omega Epsilon
- ☐ Alpha Pi Mu
- ☐ American Concrete Institute
- ☐ AIAA
- ☐ AIChE
- ☐ ASABE
- ☐ ASCE
- ☐ ASHRAE
- ☐ ASME
- ☐ ACM
- ☐ Auburn Materials Society
- ☐ Auburn Off-Road
- ☐ War Eagle Motorsports
- ☐ Auburn Biomedical Engineering Society
- ☐ Chi Epsilon
- ☐ CEGS
- ☐ Cupola Engineering Ambassadors
- ☐ Design Build Fly
- ☐ Engineers Without Borders

- [ ] Eta Kappa Nu
- [ ] Human Factors and Ergonomics Safety
- [ ] INFORMS
- [ ] IEEE
- [ ] IISE
- [ ] ITE
- [ ] NOBCCChE
- [ ] NSBE
- [ ] Phi Psi
- [ ] Pi Tau Sigma
- [ ] Sigma Gamma Tau
- [ ] SEED
- [ ] SHPE
- [ ] SWE
- [ ] Space Club
- [ ] SOAR
- [ ] SPARC
- [ ] Tau Beta Pi
- [ ] TAPPI
- [ ] Them Park Engineering
- [ ] TLSS

- [ ] Rocketry Association
- [ ] Other _____

Student Team Competitions (check all that apply)

- [ ] Formula SAE
- [ ] Baja SAE
- [ ] Hyperloop
- [ ] Concrete Canoe
- [ ] Steel Bridge
- [ ] Thrill Design
- [ ] ASABE 1/4 Scale Tractor Design
- [ ] AuburnHacks
- [ ] Missile Design
- [ ] NASA's Student Launch
- [ ] Design Build Fly
- [ ] Other _____

Please indicate, by selecting all that apply, any other activities that you have participated in (check all that apply).

- ☐ ROTC - indicate branch _____
- ☐ Intramural athletics - indicate sport(s) _____
- ☐ Music - indicate group(s) _____
- ☐ Theater - indicate role(s) _____
- ☐ Student government - indicate role(s) _____

Have you taken the Fundamentals of Engineering exam?

- ○ Yes
- ○ No, but I plan to in the next 12 months
- ○ No, but I am still considering taking it
- ○ No, and I do not plan to take it

What was the result?

- ○ I passed
- ○ I am waiting for the result
- ○ I did not pass, but I will try again
- ○ I did not pass, and I do not plan to try again

Congratulations!

What services have you used in searching for employment? (check all that apply)

- ☐ Engineering Career Development Office
- ☐ AU Career Center
- ☐ Handshake
- ☐ Engineering and Technology Fair
- ☐ Other _____

What has been the best part of your Auburn engineering education?

_____
_____
_____
_____
_____

What are some ways that we could have improved your educational experience?

_____
_____
_____
_____
_____

**COA**

The next set of questions will ask about your experience as a student in the College of Agriculture.

During your time at Auburn University did you utilize or participate in the following activities sponsored by the College of Agriculture?

| | Never | A few times | All the time |
|---|---|---|---|
| Career Counseling | ○ | ○ | ○ |
| Ag Alumni Mentoring Program | ○ | ○ | ○ |
| Our Work Seminars | ○ | ○ | ○ |
| College of Agriculture Career Fair | ○ | ○ | ○ |
| Career Development Workshops (Resume Workshops, Undergraduate Research Info Session, etc.) | ○ | ○ | ○ |
| Find your Career Email | ○ | ○ | ○ |
| Etiquette Dinner | ○ | ○ | ○ |
| E.T. York Seminar Series | ○ | ○ | ○ |
| On-Campus Interviews | ○ | ○ | ○ |
| Meeting with an Ag Peer Mentor | ○ | ○ | ○ |
| York International Seminar | ○ | ○ | ○ |

During your time at Auburn did you participate in any of the following College of Agriculture Club/Organizations? (Select all that apply)

- [ ] Ag Ambassadors
- [ ] Ag Peer Mentor Program
- [ ] Agriculture Student Council
- [ ] American Fisheries Society
- [ ] American Society of Agriculture & Biological Engineers (ASABE)
- [ ] Auburn Young Farmers
- [ ] Block and Bridle
- [ ] Collegiate Cattlemen & Cattlewomen
- [ ] Collegiate FFA
- [ ] Crop, Soil, and Environmental Science Club
- [ ] Food Science Club
- [ ] Collegiate Horseman's Association
- [ ] Horticulture Club
- [ ] Landscape and Nursery Association
- [ ] Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS)
- [ ] Organic Gardening Club
- [ ] Poultry Science Club
- [ ] Pre-Vet Medical Association
- [ ] Sigma Alpha
- [ ] USAS (Aquaculture)

- [ ] Agribusiness Club
- [ ] NAMA
- [ ] Ag Hill Communications
- [ ] Intercollegiate Horse Show Association (IHSA)
- [ ] Other (not listed) _____
- [ ] None

Describe your College of Agriculture Club/Organization experience:

| | Yes | No |
|---|---|---|
| Held and officer position | ○ | ○ |
| Attended a professional conference as a member of an organization | ○ | ○ |
| Participated in a team competition | ○ | ○ |
| Active member in Ag Council | ○ | ○ |
| Attended Ag Council sponsored events (Welcome Back Picnic, O-Night, Ag Week, etc.) | ○ | ○ |
| Participated in a Club hosted Philanthropic Event | ○ | ○ |
| Engaged with Industry Professionals | ○ | ○ |

Please indicate how adequately prepared for the workforce you are with regards to, LEADERSHIP, based off your experience in the College of Agriculture.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I have the ability to think strategically. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to recognize when to lead and when to follow. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to deal with conflict. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to motivate others. | ○ | ○ | ○ | ○ | ○ |

Please indicate how adequately prepared for the workforce you are with regards to, PROFESSIONALISM, based off your experience in the College of Agriculture..

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I have the ability to accept criticism. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to take direction from others. | ○ | ○ | ○ | ○ | ○ |
| I am trustworthy with sensitive information. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to maintain appropriate decorum and demeanor. | ○ | ○ | ○ | ○ | ○ |

Please indicate how adequately prepared for the workforce you are with regards to, TEAMWORK, based off your experience in the College of Agriculture.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I am a productive team member. | ○ | ○ | ○ | ○ | ○ |
| I am punctual and meet deadlines. | ○ | ○ | ○ | ○ | ○ |
| I am accountable to the team. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to share ideas to multiple audiences. | ○ | ○ | ○ | ○ | ○ |

Please indicate how adequately prepared for the workforce you are with regards to, SELF-MANAGEMENT, based off your experience in the College of Agriculture.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I have effective work habits. | ○ | ○ | ○ | ○ | ○ |
| I have efficient work habits. | ○ | ○ | ○ | ○ | ○ |
| I am a self-starter. | ○ | ○ | ○ | ○ | ○ |
| I work well under pressure. | ○ | ○ | ○ | ○ | ○ |

Please indicate how adequately prepared for the workforce you are with regards to, DECISION MAKING & PROBLEM-SOLVING, based off your experience in the College of Agriculture.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I have the ability to identify and analyze problems. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to understand the effects of my decisions. | ○ | ○ | ○ | ○ | ○ |

Please indicate how adequately prepared for the workforce you are with regards to, COMMUNICATION SKILLS, based off your experience in the College of Agriculture.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I have the ability to listen effectively to others around me. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to communicate accurately to others. | ○ | ○ | ○ | ○ | ○ |
| I have the ability to communicate concisely to others. | ○ | ○ | ○ | ○ | ○ |

How important is writing to the scholarly and professional work done in your major?

- ○ Extremely important
- ○ Very important
- ○ Moderately important
- ○ Slightly important
- ○ Not at all important

I feel prepared to meeting the writing demands I expect to encounter during my career.

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

Is there anything else you would like to tell us about your experience in the College of Agriculture?

_____
_____
_____
_____
_____

As a graduate/Alumni would you like to continue to receive emails from the College of Agriculture Student Services Office? (Job Announcements, Program Updates, Involvement Opportunities, etc.)

- ○ Yes
- ○ No

**AG_AnimalScience**

The next set of questions will ask about your experience as an Animal Science major, specifically.

Did you participate in any of the "U" courses? Please indicate by selecting yes or no from the list below.

| | Yes | No |
|---|---|---|
| Beef U | ○ | ○ |
| Dairy U | ○ | ○ |
| Dairy Goat U | ○ | ○ |
| Horse U | ○ | ○ |

Please indicate your agreement (1-strongly disagree to 5 - strongly agree) with the following statements about the "U" courses.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| There were appropriately high, performance expectations during the "U" experience. | ○ | ○ | ○ | ○ | ○ |
| Effort was required over an extended period of time. | ○ | ○ | ○ | ○ | ○ |
| I interacted with faculty and peers during my "U" experience. | ○ | ○ | ○ | ○ | ○ |
| I was exposed to people and/or settings that were unfamiliar to me. | ○ | ○ | ○ | ○ | ○ |
| I was provided with constructive feedback. | ○ | ○ | ○ | ○ | ○ |
| There were structured opportunities to reflect on my learning. | ○ | ○ | ○ | ○ | ○ |
| There was real-world application to my experience. | ○ | ○ | ○ | ○ | ○ |
| I orally presented about my "U" experience. | ○ | ○ | ○ | ○ | ○ |

Please rate the following statement from 1-strongly disagree to 5-strongly agree:
My advisor has thorough knowledge about advising details related to my individual academic needs and professional goals.

- ○ Strongly disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Strongly agree

Did you take a graduate-level (i.e. 6000 or higher) courses? Please indicate by selecting yes or no.

- ○ Yes
- ○ No

What was the title(s) of the course(s) (Nutrition, 6050)?

_____

Has your life improved by your experiences in our Animal Sciences program? Please indicate by selecting yes or no.

- ○ Yes
- ○ No

Please explain why or why not.

_____
_____
_____
_____
_____

Now that you are about to graduate, name 1 or 2 things you now think differently about.

_____
_____
_____
_____
_____

**AG_Poultry_Food**

The next set of questions will specifically ask about your experience with your major as either a Poultry or Food Science student.

One a scale of 1-extremely dissatisfied to 5-extremely satisfied, please indicate your satisfaction with the poultry or food science education you received.

- ○ Extremely dissatisfied
- ○ Somewhat dissatisfied
- ○ Neither satisfied nor dissatisfied
- ○ Somewhat satisfied
- ○ Extremely satisfied

What was the most valuable component (class, requirement, activity) of your poultry or food science education?

_____

What was the least valuable component (class, requirement, activity) of your poultry or food science education?

_____

**COSAM**

During your time at Auburn dd you participate in any of the following COSAM clubs/organizations? (check all that apply)

- ☐ Alpha Episilon Delta
- ☐ Physical Therapy/Occupational Therapy Club
- ☐ Pre-Pharmacy Club
- ☐ Pre-Physician Club
- ☐ Pre-Veterinary Medical Association
- ☐ Lambda Tau
- ☐ COSAM Student Council (SGA)
- ☐ Association for Women in Science (AWIS)
- ☐ Beta Beta Beta
- ☐ Society of Conservation Biology
- ☐ COSAM Leaders
- ☐ COSAM Research Ambassadors
- ☐ Marine Biology Club
- ☐ Mathematics Club
- ☐ Association for Women in Mathematics
- ☐ Microbiology Club
- ☐ Auburn Chemistry Society
- ☐ GeoClub
- ☐ COSAM OIED Ambassadors
- ☐ STEM Coalition of United Learners (SCUL)

- [ ] National Organization for the Professional Advancement of Black Chemists and Chemical Engineers
- [ ] Sigma Gamma Epsilon (Geology Honor Society)
- [ ] American Association of Petroleum Geologists
- [ ] Gamma Theta Epsilon (Geography Honor Society)
- [ ] Society of Women in Sciences and Mathematics (SWSM)
- [ ] Society of Physics Students
- [ ] Social Media Ambassadors
- [ ] Minority Association of Pre-Health Students (MAPS)

During your time in COSAM do you feel you gained an understanding of the important of inclusion and diversity in STEM fields?

- ○ Yes
- ○ No

Did you utilize any of the resources offered by the COSAM Office of Inclusion, Equity, and Diversity?

- ○ Yes
- ○ No

Which resources did you utilize? (Check all that apply)

- ☐ drop-in center tutoring
- ☐ study rooms
- ☐ Cultivating Diversity in STEM Learning Community
- ☐ Dine & Design Professional Development Workshops
- ☐ Preparing Students for Academic Success in STEP (PASS) Mentoring Program
- ☐ STEM GLIDE Study Abroad

The next set of questions will ask you to respond about your major department. Please indicate your agreement (strongly disagree to strongly agree) to the following statements about your major department.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| The preparation I received in the lower division courses (2000 and 3000-level) in my department was adequate for my success in upper division (4000 and 5000-level) major courses. | ○ | ○ | ○ | ○ | ○ |
| Required and elective courses in my major were offered frequently enough that I could complete my curriculum without delay. | ○ | ○ | ○ | ○ | ○ |
| The overall quality of instruction from faculty in my major courses was sufficient for me to succeed in the coursework. | ○ | ○ | ○ | ○ | ○ |
| The overall quality of instruction from graduate teaching assistants in my major courses was sufficient for me to succeed in the coursework. | ○ | ○ | ○ | ○ | ○ |
| Overall, I found the material in the courses in my department to be intellectually challenging and stimulating. | ○ | ○ | ○ | ○ | ○ |
| Overall, I feel that my education has prepared me well for further education or a career in my major field. | ○ | ○ | ○ | ○ | ○ |
| The elective courses were sufficiently diverse as to satisfy my interests and provide a broad foundation in my major. | ○ | ○ | ○ | ○ | ○ |

As a graduate would you like to continue to receive emails from the COSAM Student Services Office? (Program updates, involvement opportunities, etc.)

- ○ Yes
- ○ No

Please provide your preferred email address:

_____

Were you an Undergraduate Teaching Assistant, or Undergraduate Learning Assistant, for a BIOL course at any time during your undergraduate degree?

- ○ Yes
- ○ No

Did you have a course substitution while completing your undergraduate degree?

- ○ yes
- ○ no
- ○ I am not sure.

What (class) did you sub that class with? (e.g. BIOL 4000)

_____

What class did you substitute? (e.g. BIOL 4000)

_____

Why did you request the course substitution?

- ○ The class was not offered in the semester I planned on graduating.
- ○ I previously dropped the course and it was no longer offered in a semester prior to my graduation.
- ○ The class that was subbed in was more applicable to my future plans.
- ○ I did not have the correct pre-requisites for the class.
- ○ Other _____

**CHS**

The next set of questions will ask you to reflect on your experiences as a student within the College of Human Sciences, specifically. Please respond accurately and provide thoughtful responses to each question.

Please specify any Minor(s) you have earned at Auburn University.

_____

The next question will ask you to reflect back on your internship experience(s).

Please indicate your agreement with the following statements regarding the value of your internship experience (specifically an internship taken for credit).
**"My internship helped me to":**

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Understand educational theory related to my major | ○ | ○ | ○ | ○ | ○ |
| Network with industry professionals | ○ | ○ | ○ | ○ | ○ |
| Obtain professional references | ○ | ○ | ○ | ○ | ○ |
| Clarify my own professional career goals | ○ | ○ | ○ | ○ | ○ |
| Gain on-the-job skills that I will use in my career | ○ | ○ | ○ | ○ | ○ |
| Obtain a permanent job | ○ | ○ | ○ | ○ | ○ |

Please list any comments you have regarding your required internship experience.

_____
_____
_____

_____

_____

Did you participate in service activities while at Auburn University?

- ○ Yes
- ○ No

Did you participate in professional organizations related to your major/college?

- ○ Yes
- ○ No

Did you hold any leadership positions in student organizations related to your major/college?

- ○ Yes
- ○ No

Check the space beside each statement which best represents your opinion or the extent to which your College of Human Sciences degree program effectively prepared you for each defined area using the following rating scale:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| for effective performance in my chosen career field | ○ | ○ | ○ | ○ | ○ |
| to understand theories or subject matter in my field of study | ○ | ○ | ○ | ○ | ○ |
| to effectively demonstrate information technology (computer) skills related to my field of study | ○ | ○ | ○ | ○ | ○ |
| to effectively demonstrate interpersonal skills necessary for my field of study | ○ | ○ | ○ | ○ | ○ |
| to effectively communicate information and ideas in writing | ○ | ○ | ○ | ○ | ○ |
| to understand the influence of law and administrative regulations on business decisions within my field | ○ | ○ | ○ | ○ | ○ |
| to work effectively as a member of a team | ○ | ○ | ○ | ○ | ○ |
| to utilize creativity | ○ | ○ | ○ | ○ | ○ |
| to be aware of major professional organizations in my field | ○ | ○ | ○ | ○ | ○ |
| to manage my time and resources effectively to complete projects or goals successfully | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| to understand different opinions on a subject and learn from them | ○ | ○ | ○ | ○ | ○ |
| to interact effectively with individuals from cultures or backgrounds different from my own | ○ | ○ | ○ | ○ | ○ |
| to understand the global world in which we live | ○ | ○ | ○ | ○ | ○ |
| to take initiative (i.e. demonstrate leadership) | ○ | ○ | ○ | ○ | ○ |
| to adapt to change and be flexible | ○ | ○ | ○ | ○ | ○ |
| to process information and make effective decisions | ○ | ○ | ○ | ○ | ○ |
| to perform effectively in a globally competitive environment | ○ | ○ | ○ | ○ | ○ |
| to demonstrate the level of work and commitment necessary for success in my field | ○ | ○ | ○ | ○ | ○ |

Did you obtain any job shadowing experience(s) in a medically related setting, such as a clinic, nursing home, or physician's office?

- ○ Yes
- ○ No

If yes, please enter the following information for all locations at which you gained experience: Organization Name. City/State. Organization Type (Hospital, Private Practice, Clinic, etc). Number of hours.

- ○ Organization 1 _____
- ○ Organization 2 _____
- ○ Organization 3 _____

Please list any additional comments you have regarding your job shadowing experience.

_____
_____
_____
_____
_____

Did you participate in service activities and/or volunteer hours while at Auburn University?

- ○ Yes
- ○ No

If yes, approximately how much time did you spend in service/volunteering hours over the course of your undergraduate academic career?

- ○ 10 or fewer hours
- ○ 11-20 hours
- ○ 21-30 hours
- ○ More than 30 hours

What type(s) of research experience (if any) did you participate in as an undergraduate student?

_____
_____
_____
_____
_____

**EN_Civil**

The next set of questions will ask you to reflect on your experience(s) as a Civil Engineering Student.

Please select faculty members that have had the greatest impact on your development as a civil engineering student.

- [ ] Anderson
- [ ] Barnes
- [ ] Barnett
- [ ] Beckingham
- [ ] Bowers
- [ ] Capiro
- [ ] Davidson
- [ ] Donald
- [ ] Fang
- [ ] Hayworth
- [ ] Hughes
- [ ] Lange
- [ ] LaMondia
- [ ] Marshall
- [ ] Miletic
- [ ] Montgomery
- [ ] Nowak
- [ ] O'Donnell
- [ ] Rodezno
- [ ] Roueche

- [ ] Rueda
- [ ] Schindler
- [ ] Stallings
- [ ] Timm
- [ ] Turochy
- [ ] Vasconcelos
- [ ] Zhao-environmental
- [ ] Zhou-transportation

How would you rate

| | Very Satisfied | Somewhat Satisfied | Neutral | Somewhat Dissatisfied | Very Dissatisfied |
|---|---|---|---|---|---|
| Your overall preparation for a entry-level engineering job? | ○ | ○ | ○ | ○ | ○ |

Answer the questions below by selecting the option that best represents your confidence level.
**1 = not at all confident 4 = moderately confident 7 = highly confident**

| | 1 - not at all confident | 2 | 3 | 4 - moderately confident | 5 | 6 | 7 - highly confident |
|---|---|---|---|---|---|---|---|
| Are you confident that you can include principles of sustainability in design? | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Are you confident that you can explain some basic concepts in project management (e.g. project manager responsibilities, defining and meeting client requirements, risk assessment and management, stakeholder identification and involvement, contract negotiation, project work plans, scope and deliverables, budgeting and scheduling, interaction among other disciplines, QA and QC, dispute resolution)? | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Are you confident that you can explain some basic concepts of business (e.g. legal forms of ownership, organizational structure and design, income statements, balance sheets, engineering economics, finance, marketing and sales, billable time, overhead, profit)? | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Are you confident that you can explain some basic concepts in public policy (e.g. formulation of public policy, laws and regulations, funding mechanisms, public education and involvement, government-business interaction, the public service responsibility of professionals)? | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Are you confident you can explain some basic concepts in leadership (e.g. earning trust, trusting others, formulating and articulating vision, communication, rational thinking, openness, consistency, commitment to organizational values, discretion with sensitive information)? | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Please note up to three top strengths (or positive aspects) of the AU civil engineering undergraduate program (optional).

- ○ Strength 1 _____
- ○ Strength 2 _____
- ○ Strength 3 _____

Please note up to three specific improvements that would strengthen the AU civil engineering undergraduate program (optional).

- ○ Improvement 1 _____
- ○ Improvement 2 _____
- ○ Improvement 3 _____

**CO_ED**

The next set of questions will ask you to reflect on your experience(s) as a student within the College of Education.

Program Quality: Please indicate your level of agreement with the following statements about your coursework and experiences in your degree program (major).

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I have acquired an understanding of how to apply the subject matter I learn to authentic work experiences. | ○ | ○ | ○ | ○ | ○ |
| I have deepened my understanding of general theories of learning in order to support students and/or clients in their growth and development. | ○ | ○ | ○ | ○ | ○ |
| I have a thorough understanding of how to perform my professional duties. | ○ | ○ | ○ | ○ | ○ |
| I have acquired a deep knowledge of how to assess the needs and growth of my students/clients. | ○ | ○ | ○ | ○ | ○ |
| I have increased my understanding of responsible and ethical practices within my profession. | ○ | ○ | ○ | ○ | ○ |
| I have contributed to my professional community through collaborative efforts with colleagues. | ○ | ○ | ○ | ○ | ○ |
| I have had opportunities to expand and develop my commitment to diversity. | ○ | ○ | ○ | ○ | ○ |
| I have analyzed my past practices to stimulate ongoing improvement of future practices. | ○ | ○ | ○ | ○ | ○ |
| The course instructors displayed a thorough understanding of the content they taught. | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| The course instructors used effective teaching strategies to clarify content. | ○ | ○ | ○ | ○ | ○ |
| The course instructors were accessible outside of class. | ○ | ○ | ○ | ○ | ○ |
| The faculty in my program area provided helpful feedback regarding course content and assessment. | ○ | ○ | ○ | ○ | ○ |
| The faculty supported me in my career growth and development. | ○ | ○ | ○ | ○ | ○ |
| The faculty encouraged and development of my professional attitudes through their teaching/modeling. | ○ | ○ | ○ | ○ | ○ |
| Library and media resources were sufficient to support me in completion of my program work. | ○ | ○ | ○ | ○ | ○ |
| The overall program fulfilled my expectations. | ○ | ○ | ○ | ○ | ○ |
| The value of the educational experiences was worth the expense invested in the program. | ○ | ○ | ○ | ○ | ○ |
| I would recommend this program to a close friend. | ○ | ○ | ○ | ○ | ○ |

Please provide any additional comments that will help the College of Education in developing and improving their programs.

_____
_____
_____
_____
_____

Quality of Instruction:

Please indicate the quality (1-poor to 4-very good) of each instructional element/technique.

| | Poor | Fair | Good | Very Good | N/A |
|---|---|---|---|---|---|
| Teaching | ○ | ○ | ○ | ○ | ○ |
| Feedback on Assignments | ○ | ○ | ○ | ○ | ○ |
| Incorporation of Performance Assessments | ○ | ○ | ○ | ○ | ○ |
| Incorporation of Traditional Assessments (Paper and Pencil) | ○ | ○ | ○ | ○ | ○ |

Subject Matter, Learning Theories, Teaching Pedagogy/Techniques:

Please indicate the extent that your Education coursework prepared you to do the following statements from 1-not at all to 4-extremely.

| | Not at all | Seldom | Often | Extremely | N/A |
|---|---|---|---|---|---|
| Teach Content specific to your discipline | ○ | ○ | ○ | ○ | ○ |
| Incorporate Learning Theories to instruction | ○ | ○ | ○ | ○ | ○ |
| Incorporate Learning Theories to Assessment | ○ | ○ | ○ | ○ | ○ |
| Create Learning Opportunities for all students | ○ | ○ | ○ | ○ | ○ |
| Meet the learning needs of diverse student populations (e.g. students with disabilities and English language learners) | ○ | ○ | ○ | ○ | ○ |

Research Methods, Professional Development, Societal Implications:

Please indicate the extent that your Education coursework prepared you to do the following statements from 1-not at all to 4-extremely.

| | Not at all | Seldom | Often | Extremely | N/A |
|---|---|---|---|---|---|
| Inquiry/research skills | ○ | ○ | ○ | ○ | ○ |
| Professional Organizations | ○ | ○ | ○ | ○ | ○ |
| School Law, Code of Ethics, and/or Educational Policy | ○ | ○ | ○ | ○ | ○ |
| Professional Development | ○ | ○ | ○ | ○ | ○ |
| Families as an educational stakeholder | ○ | ○ | ○ | ○ | ○ |

Classroom Management:

Please indicate the extent that your Education coursework prepared you to do the following activities from 1-not at all to 4-extremely.

| | Not at all | Seldom | Often | Extremely | N/A |
|---|---|---|---|---|---|
| Incorporate Theories to Classroom Management | ○ | ○ | ○ | ○ | ○ |
| Manage a diverse classroom environment | ○ | ○ | ○ | ○ | ○ |
| Accommodate diverse student populations equitably | ○ | ○ | ○ | ○ | ○ |

Aspects of Student Development:

Please indicate the extent that your Education coursework addressed the following items from 1-not at all to 4-extremely.

| | Not at all | Seldom | Often | Extremely | N/A |
|---|---|---|---|---|---|
| Theories of Student Learning | ○ | ○ | ○ | ○ | ○ |
| Motivational Theory | ○ | ○ | ○ | ○ | ○ |
| Development Milestones of Children and Adolescents | ○ | ○ | ○ | ○ | ○ |

Classroom Equity and Diversity:

Please indicate the extent that your Education coursework addressed the following items from 1-not at all to 4-extremely.

| | Not at all | Seldom | Often | Extremely | N/A |
|---|---|---|---|---|---|
| Aspects of P-12 Diversity | ○ | ○ | ○ | ○ | ○ |
| Accommodations for Students with Disabilities | ○ | ○ | ○ | ○ | ○ |
| Accommodations for English language learners | ○ | ○ | ○ | ○ | ○ |
| Classroom Equity | ○ | ○ | ○ | ○ | ○ |

Management of Education Constituencies:

Please indicate the extent that your Education coursework prepared you to do the following behaviors, from 1-not at all to 4-extremely.

| | Not at all | Seldom | Often | Extremely | N/A |
|---|---|---|---|---|---|
| Communicate with parents | ○ | ○ | ○ | ○ | ○ |
| Communicate with local community agencies. | ○ | ○ | ○ | ○ | ○ |
| Communicate within the school environment. | ○ | ○ | ○ | ○ | ○ |

Assessment of Student Learning:

Please indicate the extent that your Education coursework prepared you to do the following behaviors, from 1-not at all to 4-extremely.

| | Not at all | Seldom | Often | Extremely | N/A |
|---|---|---|---|---|---|
| Provide feedback on Assignments | ○ | ○ | ○ | ○ | ○ |
| Incorporate Performance Assessments | ○ | ○ | ○ | ○ | ○ |
| Incorporate Traditional Assessments (Paper and Pencil) | ○ | ○ | ○ | ○ | ○ |
| Accommodate Assessments for diverse student populations | ○ | ○ | ○ | ○ | ○ |

Satisfaction with Administrate Services (PES Services or School of Kinesiology):

Please indicate your satisfaction with the administrate services from 1-very dissatisfied to 4-very satisfied.

| | Very dissatisfied | Slightly dissatisfied | Moderately satisfied | Very satisfied | N/A |
|---|---|---|---|---|---|
| Availability of Academic Advisors | ○ | ○ | ○ | ○ | ○ |
| Availability of Support Personnel (Director of PES, Director of Assessment) | ○ | ○ | ○ | ○ | ○ |
| Quality of response received from Academic Advisors | ○ | ○ | ○ | ○ | ○ |

Satisfaction with Student Services:

Please indicate your satisfaction with student services, from 1-very dissatisfied to 4-very satisfied.

| | Very dissatisfied | Slightly dissatisfied | Moderately satisfied | Very satisfied | N/A |
|---|---|---|---|---|---|
| Learning Resource Center | ○ | ○ | ○ | ○ | ○ |
| Campus Library (RBD Library) | ○ | ○ | ○ | ○ | ○ |
| Computer Labs | ○ | ○ | ○ | ○ | ○ |
| Classroom Technology (Haley Center and/or School of Kinesiology classrooms) | ○ | ○ | ○ | ○ | ○ |

Satisfaction with fellow students in program:

Please indicate your satisfaction with your fellow students, from 1-very dissatisfied to 4-very satisfied.

| | Very dissatisfied | Slightly dissatisfied | Moderately satisfied | Very satisfied | N/A |
|---|---|---|---|---|---|
| Peers in College of Education | ○ | ○ | ○ | ○ | ○ |
| Peers in your program area | ○ | ○ | ○ | ○ | ○ |
| Diversity of Peers | ○ | ○ | ○ | ○ | ○ |
| Class Size | ○ | ○ | ○ | ○ | ○ |
| Computer Labs | ○ | ○ | ○ | ○ | ○ |

Satisfaction with Student Teaching Experience:

Please indicate your satisfaction with your Clinical Residency experience, from 1-very dissatisfied to 4-very satisfied.

| | Very dissatisfied | Slightly dissatisfied | Moderately satisfied | Very satisfied | N/A |
|---|---|---|---|---|---|
| Knowledge of cooperating Teacher | ○ | ○ | ○ | ○ | ○ |
| Pedagogical Content Knowledge of Cooperating Teacher | ○ | ○ | ○ | ○ | ○ |
| Supervision of University Supervisor | ○ | ○ | ○ | ○ | ○ |
| Tk20 Submission Process | ○ | ○ | ○ | ○ | ○ |

Satisfaction with Career Services:

Please indicate your satisfaction with career services, from 1-very dissatisfied to 4-very satisfied.

| | Very dissatisfied | Slightly dissatisfied | Moderately satisfied | Very satisfied | N/A |
|---|---|---|---|---|---|
| Resume Assistance | ○ | ○ | ○ | ○ | ○ |
| Job Announcements | ○ | ○ | ○ | ○ | ○ |
| Teacher Interview Day | ○ | ○ | ○ | ○ | ○ |

Satisfaction with Technology

Please indicate your satisfaction with technology availability, from 1-very dissatisfied to 4-very satisfied.

| | Very dissatisfied | Slightly dissatisfied | Moderately satisfied | Very satisfied | N/A |
|---|---|---|---|---|---|
| Availability of computer on campus | ○ | ○ | ○ | ○ | ○ |
| Classroom technology (Haley Center and/or School of Kinesiology classrooms) | ○ | ○ | ○ | ○ | ○ |
| Technological Tools (e.g., iPads, video cameras, scanners, etc.) | ○ | ○ | ○ | ○ | ○ |

Satisfaction with Advising

Please indicate your satisfaction with your advisor , from 1-very dissatisfied to 4-very satisfied.

| | Very dissatisfied | Slightly dissatisfied | Moderately satisfied | Very satisfied | N/A |
|---|---|---|---|---|---|
| Academic Advisors knowledge of program requirements | ○ | ○ | ○ | ○ | ○ |
| Communication from Academic Advisors | ○ | ○ | ○ | ○ | ○ |
| Academic Advisors knowledge of University policies and procedures regarding academics | ○ | ○ | ○ | ○ | ○ |
| Academic Advisors are approachable and concerned with my overall academic success | ○ | ○ | ○ | ○ | ○ |
| Academic Advisors are courteous and professional | ○ | ○ | ○ | ○ | ○ |
| Academic Advisors timely and factual information | ○ | ○ | ○ | ○ | ○ |

Institution Specific Questions:

Please indicate your satisfaction with Institution from 1-very dissatisfied to 4-very satisfied.

| | Very dissatisfied | Slightly dissatisfied | Moderately satisfied | Very satisfied | N/A |
|---|---|---|---|---|---|
| accessibility of your program faculty advisor | ○ | ○ | ○ | ○ | ○ |
| responsiveness of your faculty advisor in answering questions about your plan of study | ○ | ○ | ○ | ○ | ○ |
| quality of information regarding program requirements you received from your faculty advisor | ○ | ○ | ○ | ○ | ○ |
| communication you received regarding criteria for admission to teacher education | ○ | ○ | ○ | ○ | ○ |
| communication you received regarding criteria for admission to internship | ○ | ○ | ○ | ○ | ○ |
| communication you received regarding graduation and certification requirements. | ○ | ○ | ○ | ○ | ○ |
| practicum/lab experiences in preparing you for your internship | ○ | ○ | ○ | ○ | ○ |

Please use the space below to give any comments about your experience in the College of Education, Educator Preparation Program.

_____

_____

_____

_____

_____

**NURS**

How important is writing to the scholarly and professional work done in your major?

- ○ Extremely important
- ○ Very important
- ○ Moderately important
- ○ Slightly important
- ○ Not at all important

I feel prepared to meet the writing demands I expect to encounter during my career.

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

To what degree are your satisfied with the overall quality of writing instruction you received in your major?

- ○ Very satisfied
- ○ Satisfied
- ○ Neither satisfied nor unsatisfied
- ○ Unsatisfied
- ○ Very unsatisfied
- ○ N/A

**Alumni**

This next set of questions will ask you a few questions about becoming an Auburn University Alumni.

Rate the following questions about plans after graduation, on a scale of 1 to 5 (1-strongly disagree to 5-strongly agree).

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I will stay connected with Auburn University. | ○ | ○ | ○ | ○ | ○ |
| I will stay connected with my college or school. | ○ | ○ | ○ | ○ | ○ |
| I will get connected with my local Auburn Club (made up of Auburn alumni). | ○ | ○ | ○ | ○ | ○ |

What is the most meaningful thing Auburn University can do for you in the next 5-10 years?

- ○ Career skills/training
- ○ Networking opportunities to connect with other alumni
- ○ Student mentoring opportunities
- ○ Other _____

**Attitudinal Measures**

The next set of questions will ask you about a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please answer thoughtfully as you consider these characteristics.

Please indicate the extent to which you agree or disagree with the following statements from 1-strongly disagree to 5-strongly agree. I see myself as someone who...

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| does a thorough job | ○ | ○ | ○ | ○ | ○ |
| can be somewhat careless | ○ | ○ | ○ | ○ | ○ |
| is a reliable worker | ○ | ○ | ○ | ○ | ○ |
| tends to be disorganized | ○ | ○ | ○ | ○ | ○ |
| tends to be lazy | ○ | ○ | ○ | ○ | ○ |
| perseveres until the task is finished | ○ | ○ | ○ | ○ | ○ |
| does thing efficiently | ○ | ○ | ○ | ○ | ○ |
| makes plans and follows through with them | ○ | ○ | ○ | ○ | ○ |
| is easily distracted | ○ | ○ | ○ | ○ | ○ |

Please indicate your response to each of the following questions from strongly disagree to strongly agree.

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| I feel a sense of belonging to Auburn University | ○ | ○ | ○ | ○ | ○ |
| I feel that I am a member of the Auburn University community | ○ | ○ | ○ | ○ | ○ |
| I see myself as a part of the Auburn University community | ○ | ○ | ○ | ○ | ○ |
| I am enthusiastic about Auburn University | ○ | ○ | ○ | ○ | ○ |
| I am happy to be at Auburn University | ○ | ○ | ○ | ○ | ○ |
| Auburn University is one of the best schools in the nation | ○ | ○ | ○ | ○ | ○ |