

Emerging Practices of University Career Centers

What Patterns are Most Conducive to Reducing Underemployment
in College Graduates?

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ABSTRACT

Since the 1970's concern over underemployment has grown among US college graduates. Contributing factors for underemployment are debated by scholars, yet universities struggle to provide employment prospects that are commensurate to students' academic skill levels. Using career centers as a potential agent of change, this project identifies the most prevalent practices designed to improve employment opportunities for students and graduates. Follow-up research explores whether employers' financial participation in career center activities affects interactions or re-characterizes the intensity of their relationships. A one-time cross sectional analysis using national career center data reveals that career centers dedicate greater attention to student development than employer relations. Recognition of these patterns is needed to ascertain potential benefit or harm in career center-employer relations. Findings are likely to suggest areas for future improvement for both actors.

PURPOSE OF STUDY

In the early 1970's, a college degree virtually secured career prospects upon graduation. Rapid college enrollment over the next decade rendered a saturated, competitive labor market and produced what Freeman calls the “overeducated American” (Lazerson, 2010; Freeman, 1971). In 2012 underemployment among graduates ages 27-65 was approximately 30% while the rate averaged 45% for graduates ages 22-27 (Abel et al., 2014) (Figure 1).

Underemployment is defined as “The discrepancy between one’s educational attainment and the standard education level needed to perform a particular job” (Smith, 1986). Obtaining employment equivalent to one’s education level is particularly challenging for students today than it was for those in the 1970’s and 1980’s. In this increasingly competitive economy, students must rely on more than a degree to succeed. From a policy standpoint underemployment is problematic because it undermines the value and purpose of higher education, especially taking into account the rising cost of tuition.

Research Question

Because career centers were created for labor related intervention, this project explores the emerging practices university career centers embrace when preparing students for employment. With this information, I hope to contribute to the limited literature on college graduate underemployment, and encourage new practices by sharing the findings with local career centers professionals.

Secondary research questions investigate how financial contributions by employers factor into career center operations and to what end career centers devote their efforts: student development or employer engagement.

Firsthand observations demonstrate that employers who invest more time and resources in campus involvement build stronger relationships with the career center. Furthermore, both actors can leverage those relationships to create formalized recruitment programs. Recurring employer engagement signifies trust between entities and encourages career centers to sponsor students of competitive caliber, thus improving the probability of gainful employment.

REVIEW OF LITERATURE

To fully understand modern day career centers, it is helpful to review how their practices and purposes have transformed over the years. Pertinent elements of career center practices such as skill development and employer engagement will also be reviewed.

History of Career Services

Scholars suggest that career development services transformed incrementally over time. This might be so because improvements have been added onto earlier stages, thus resulting in an intentional, less organic progression.

Dey and Cruzvergara (2014) argue that the utility and application of career development has transformed based on the given social, political, and economic climate. Along with Mark Pope, they segment this transformation in six stages occurring from roughly 1900 to 2030. The first two stages explain career development at the K-12 level whereas the other four pertain to the collegiate level.

Stage 1: Vocational Guidance (1900-1920)

Stage 1 initially focused on career development through master-apprentice relationships as the standard model of preparing oneself for skilled work. However rapid industrialization undermined apprenticeships by replacing apprentice level tasks with machinery. Unlike the rigid trade guilds in England that protected apprentices, labor standards in the U.S. gradually loosened resulting in exploitative practices (Swanson & Holton, 2009). As apprenticeships declined, vocationalism emerged as a way to keep boys in school throughout their teen years and receive formal job training at the same time (Lazerson, 2010). The exact definition for vocationalism was debated in the Lazerson text, but at some level each source defined it as professional training for careers or “occupational roles” rather than short term jobs (Lazerson, 2010).

Early educators advocated for experiential learning hundred of years before vocationalism was formally known. John Locke, Johan Heinrich Pestalozzi, and Jean-Jacques Rousseau favored learning through sensory stimulation (Swanson & Holton, 2009). Rousseau was one of the leaders in this school of thought arguing that “education must be formed around the active experience of the young” and that even a small amount of experiential learning renders better outcomes than a standard lecture format (Swanson & Holton, 2009).

While apprenticeships were strictly hands on, vocational schooling focused on a conjunction of experiential and academic learning. It also helped the massive inflow of immigrants coming to the United States transition to an industrialized society (Herr, Rayman & Garis, 1993; Vinson, Reardon, and Bertoch, 2011). It was during this time that education, mainly high school, was increasingly understood to be a mechanism for economic mobility and not merely scholastic achievement (Lazerson, 2010). Through vocational training, individuals were able to employ specific skill sets and ultimately achieve self-sufficiency.

Stage 2: Teacher Guidance (1920-1940)

The labor market faced several turning points at this time including the growing number of Baby Boomers in the classroom, the Great Depression, and post World War I industrialization. These conditions resulted in a high demand of instructors to accommodate the volume of students as well as skill sets commensurate to the needs of an industrialized era. Due to previous concerns that the young generation was insufficiently prepared for the workforce, the 1917 Smith Hughes Act laid the foundation for Stage 2. This piece of legislation subsidized educators teaching various vocations and trades. It also served as an alternative to the standard curriculum for high school students, while priming them to thrive in a newly industrialized economy (Stephens, 1995). Rather than having a dedicated career center, instructors in this era were responsible for their students' professional growth.

Stage 3: Job Placement (1940-1970)

The conclusion of World War II and subsequent introduction of the GI Bill resulted in high enrollment of ex-servicemen (Wessel, 1998). Freeland (1992) calls this time period "academia's golden age". The GI Bill signified a vast social change in who could pursue higher education, "the veterans' academic success demolished the traditional idea that only a select few could benefit from college. As a result, a new conception emerged of who and how many should go to college and who would pay for it" (Lazerson, 2010). Wessel writes that employer relations (the connection of college graduates with recruiters) emerged from the veteran population's determination to secure employment as civilians. The passing of the GI Bill also sparked an expansion in the presence of career placement centers on university campuses.

The vast number of employment seeking veterans in conjunction with a growing manufacturing industry changed the guidance aspect of career centers to a placement type of arrangement (Dey & Cruzvergara, 2014). Ironically the terms “Career Counseling” and “Career Development” became more mainstream during this stage (Super, 1955).

Stage 4: Career Counseling (1970-1990)

College enrollment and graduation increased rapidly during Stage 4 resulting in a saturated labor market for job seekers. Unlike Stage 3’s focus on job placement, career counselors re-assumed a guidance role similar to Stage 2 because the need for career counselors and targeted professional development emerged (Kretovicks et al., 1999). Emphasis was placed on equipping students with the needed skills and strategies to successfully manage their own career search instead of placing them in a particular occupation. Metrics for success transitioned from placement rates to attendance of career counseling appointments and workshops.

Stage 5: Professional Networking (1990-2010)

More recently, a booming technology industry and information sector reinvigorated demands in the labor market. Accordingly, employer engagement practices popularized as it rounded out career centers from a transaction based service to one that offers relationship building opportunities for students and employers (Dey & Real, 2010). Employer relations is advantageous for employers, career centers, and students. Through these arrangements employers gain insight into recent higher education practices from a skill-building perspective and students learn to socialize in a way that expands their professional network. Career centers also accumulate firsthand knowledge to impart in career counseling sessions while growing a network of contacts to be utilized for future outreach efforts.

Employer engagement was also a necessity for career centers. With reductions in institutional funding, career centers have had to generate revenue via corporate sponsorships. Zumeta et al. (2012) argue that these circumstances led higher education institutions to seek “entrepreneurial behavior” by affiliating more with marketplace activities. He specifically makes mention of the *U.S. News & World Report* College Scorecard that brings transparency of higher education activities to the public.

Stage 6: Connected Communities (2010-2030)

Keeping in mind that career centers react to social, political, and economic conditions, this final stage follows suit as it responds to the economic crisis of 2008. As pressures increased in the labor market, career centers began transforming their mission from a transaction-based service to an integral part of the university experience. This takes place through meaningful connections with employers and experiential education opportunities. Throughout the Great Recession businesses were forced to operate on limited budgets and minimal staff. Having undergone such restraints, employers became more prudent with their personnel decisions by hiring the most valuable candidates in preparation for another economic downturn (Young, 2014). More importantly, the burden of securing employment is no longer exclusively placed on career counselors; students remain responsible for their career outcomes.

Underemployment

Literature discusses underemployment as if it were synonymous with over-education. These concepts are defined as the discrepancy between one’s educational attainment and the standard education level needed to perform a particular job (Smith, 1986).

Abel, Deitz, and Su (2014) from the Federal Reserve Bank of New York's Research and Statistics Group identified underemployment rates in college graduates between 1994 and 2014 to discover impacts the Great Recession has left on employment outcomes. In this study "Recent College Graduates" refers to individuals ages 22-27 that have at least a Bachelor's degree, while "College Graduates" refers to individuals ages 22-65 with at least a Bachelor's degree. In both groups, underemployment rates ranged between 30%-45% from 1990-2012 (Abel et al., 2014). Research showed that the unemployment rates are higher for younger individuals. Between 2009-2011 unemployment for graduates 22 years old was nearly 10%. Whereas only 4% of individuals 35 years of age were unemployed (Abel et al., 2014). High unemployment rates are fairly normal for younger individuals that are new to the labor market and they typically normalize once workers have been in the market for some time (Abel et al., 2014).

Researchers from the Economic Policy Institute found underemployment to be approximately 17% for recent college graduates, half of Abel et al.'s figures (Shierholz, Davis, and Kimball, 2014). These figures differ because Shierholz et al.'s (2014) definition of underemployment includes unemployed individuals, part-time employees who desire full-time employment, as well as those who desire employment but no longer actively search for work. Abel et al.'s (2014) definition of underemployment is congruent with Smith (1986), framing it as a gap between one's skill or education level and the qualities needed to perform in an occupation (e.g. working as a server after receiving a Bachelor's degree). For this reason, Abel et al.'s research is the primary reference point for this project.

Hecker (1992) agrees that underemployment can be a byproduct of changing economic circumstances rather than a saturated labor market. He compares data on earnings and

employment patterns from the 1960's to 1990's among college and high school graduates unveiling that although college graduates were underemployed occupationally, they were compensated for their advanced qualifications. One may notice that much of Hecker's analysis focuses on the 1980's, which is near the same time frame that university enrollment and completion ballooned in volume.

In contrast, Smith (1986) suggests underemployment stems from both an overpopulated labor market demanding fewer educated workers and schools not countering this growth appropriately. He also posits out that the term underemployment is limited when exclusively viewed in an occupational lens. It should also account for non-monetary benefits of higher education such as social standing or reputation (Smith, 1986).

Employability

Some researchers argue that the likelihood of employment resides in one's "employability", meaning how well knowledge and skills attained from school can be applied to the workplace (Dacre Pool et al., 2007; Kumar, 2007). Adecco (2012) articulates it from a competitive perspective, by winning the job, succeeding in that function, and utilizing that success for personal and professional advancement. Yorke and Knight (2007) view it "a set of achievements, understanding and personal attributes that make individuals more likely to gain employment and be successful in their chosen occupation". Dacre Pool, Sewell, and Kumar's definition is preferred since it introduces employability as something that is crafted during one's collegiate experience to then be applied to the workplace.

Defining one's employability is inherently problematic because of its subjectivity and complex nature. Simply obtaining a job does not make one employable. Jackson (2014) points

out that employment outcomes are a poor metric for determining employability because it overlooks uncontrollable facets of the labor market such as part-time/seasonal positions and labor market competitiveness (Bridgstock 2009; Smith et al. 2000). Moreover literature shows that the criteria for employability is susceptible to variations in the labor market (Knight, 2001; Morley, 2001).

To identify college graduate employment outcomes, Jackson (2014) performed a logistic regression on recent Bachelor degree recipients from eight prestigious, research-heavy institutions in Australia. Using a sample size of nearly 30,000 in 2011 and 2012, five determinants of employability were discovered. The two most pertinent determinants were Skill Development and Graduate Identity (Australian Bureau Statistics 2010). Jackson uses Dacre Pool et al. (2007) and Kumar's (2007) definition of employability as well as Pegg et al.'s (2012) concept that employability is a long term approach to advancing one's "professional well-being and career development prospects".

Skill Development: Hughey et al. (1999) argues that the nature of the workplace and qualities for career success is rapidly changing and becoming more competitive. Verbal and written communication, flexibility, teamwork, and relationships-building are deemed as employable skills that are necessary to adapt accordingly. Hart Research Associates support these findings in a recent survey administered on behalf of the Association of American Colleges and Universities. In this study 400 employers with leadership positions in both private and not-for-profit organizations were asked to provide their perspective on job readiness in college graduates as well as the value of practical learning in college. Similar to Hughey et al. (1999), most respondents expressed that soft skills such as discernment, critical thinking, written and

verbal communication, as well as the ability to collaborate are most valued when hiring recent college graduates (AAC&U, 2015).

Graduate Identity: Students often underestimate the value of self-confidence when interacting with employers, making graduate identity a particularly interesting finding. Graduate identity refers to students assuming the persona of an employed individual while pursuing academic endeavors. This includes a positive, confident, and *pre-professional* attitude. Adecco's (2012) definition of employability indirectly refers to graduate identity because those with the "belief necessary to win a job" are typically most employable. This belief is arguably similar to having confidence in one's own professionalism and ability to exercise those valued soft skills.

Employer Engagement

Up to the 1970's, career centers primarily functioned as a destination for seniors to explore employment prospects before graduating (McGrath, 2002). Due to economic changes and a rapid growth in the volume of college enrollment, career centers emphasize professional relationships over job matching functions. This shift was reflected in Stage 5 of Dey and Cruzvergara's evolution of career development services.

Along with career center practices, expectations from students, faculty, employers, and other stakeholders have too transformed over the years (McGrath, 2002). Responses to these expectations have materialized into diverse student development practices and bringing employers to campus. However, career centers alone cannot prepare students for the working world. McGrath (2002) argues that support and understanding from faculty and outside employers are paramount for career center staff to meet stakeholders' expectations. He specifically encourages integrating employer input when developing academic guidance

strategies. McGrath elegantly phrased this measure as “involving employers to *enhance* academic advising.” *Enhance* implies that academic advising will not be replaced nor threatened, rather improved by incorporating employer feedback. By working alongside external employers and expanding their understanding of labor market conditions, academic advisors and staff may be better equipped to guide students from both an academic and professional perspective.

Establishing relationships with employers is undoubtedly necessary for career centers to become a successful space for professional development. Building relationships with employers solidifies credibility and relevance when engaging with students in career counseling sessions (McGrath, 2002). Weiser, Kochling, Kahane, and Landis (2006) argue that employers also benefit from these relationships because they foster information sharing opportunities to job seeking students.

Practical Experience

Practical learning is critical to career development in college students because it bridges knowledge obtained from the classroom with career ready skills. Helyer (2010) explains its value as such, “learning and doing cannot be separated and therefore to use knowledge to its fullest potential it must be implemented, performed and enhanced as part of a synergy’. In this statement she is suggesting that education becomes well-rounded when paired with experiential learning. However for such learning to take place, it must be recognized and accepted that learning takes place outside of the classroom (Helyer & Lee, 2014).

Internships are a popular method of gaining permanent employment after school because they provide students with practical skills for the workplace, “Experience continues to be one of the key attributes any entry-level professional can offer a prospective employer, and internships provide one of the best ways for the ambitious to obtain it” (Gault, Redington, & Schlager, 2000). Many employers actually rely on internships as a respected criterion for recruitment (Cannon & Arnold, 1998; Schmutte, 1985). Furthermore, they have the ability to strengthen relationships and levels of engagement between employers and universities because successful interns positively represent the university (Cook et al, 2004).

The National Association of Colleges and Employers (NACE) distributes an annual Student Survey Report that records employment plans for graduating seniors. The 2014 Student Survey Report shows a steady increase in internship participation since 2011 and over half of the respondents reported obtaining an internship. Conversely, the percentage of individuals receiving a full-time job offer after an internship compared to those without one varied by less than 15% (National Association for Colleges and Employers, 2014). This figure may infer that internships are less valuable than typically perceived, but one should be wary of this assumption. The type of job and whether its functions were equivalent (or not) to one’s educational level was not indicated in the survey.

While the value and learning outcomes of internships are not predictable, research indicates that the most common impediments to a positive experience are ambiguous standards, misunderstanding of the internship advantages, and an inaccurate perception of the job responsibilities (Hite and Bellizzi, 1986). To circumvent this issue of ambiguity, research suggests that firms must clearly outline the parameters, expectations, and award of the internship

program as to not mislead or deceive students (Hite and Bellizzi, 1986). By having a clear understanding of the program interns may become more empowered as emerging career professionals and boost their Graduate Identity (Jackson, 2014). In sum, experiential learning has the potential to be positive and educational, but requires intentional effort from both employers and participants.

The reviewed concepts in the literature explain the changing practices of career development centers as well as contributing factors to providing students with suitable employment opportunities. Employable skills and the merit of practical learning were also explored as areas that should be reinforced in career center practices. The following section analyzes university career centers to ascertain common and uncommon practices to ultimately see where their efforts are directed.

METHODOLOGY

Data Collection

This project utilizes secondary data from the National Association of Colleges and Employers (NACE). NACE is a professional organization that universities, colleges, and employers across the United States affiliate with to enhance their services through data, resources, and networking opportunities. Aside from being nationally recognized, this organization serves over 5,600 career center professionals in over 2,000 participating institutions (NACE, 2014). Universities pay an annual fee to become a NACE member. Because my current workplace is a participating career center, I had access to pre-compiled surveys. Permission to view and manipulate raw NACE data was acquired by Edwin Koc, Director of Research, Public Policy, and Legislative Affairs at NACE.

The 2013-2014 Career Services Benchmark Survey was used for this capstone because it includes various practices and interactions that take place between career centers and employers. The survey was distributed in September 2013 to 1,969 member institutions and received 881 responses (41% response rate). This data was manipulated using IBM SPSS Statistics 21.

Variable Operationalization

Independent variables in this study depended on the specific type of analysis but mainly included school type, school size, and financial participation. NACE categorizes school type using the Carnegie Classification method. Values in the original Carnegie Classification variable (CarnClass) needed to be refined because it included values beyond the scope of this study. Rather than replace CarnClass variable entirely, a new variable (“CarnClassFinal”) was created that excluded irrelevant institution types. Adding CarnClassFinal as a separate variable brought the total number of respondents to 882, instead of the original 881. Of the 882 respondents, 704 fit in the CarnClassFinal category (Figure 2) with values coded in the following ways:

Baccalaureate Colleges

This group is comprised of institutions in which “baccalaureate degrees represent at least 10 percent of all undergraduate degrees and where fewer than 50 master's degrees or 20 doctoral degrees were awarded” (Carnegie Classification).

- 1 = Baccalaureate Colleges - Arts & Sciences
- 2 = Baccalaureate Colleges - Diverse Fields
- 3 = Baccalaureate / Associate’s Colleges¹

Master’s Colleges and Universities

¹ “Baccalaureate / Associate’s Colleges” were reported as missing for the data analysis because it was an outlier with only 3 valid responses out of 9.

In addition to offering baccalaureate programs, this category includes “schools that awarded at least 50 master's degrees and fewer than 20 doctoral degrees” and excludes specialty schools such as Tribal Colleges (Carnegie Classification).

- 4 = Master’s Colleges and Universities (larger programs)
- 5 = Master’s College and Universities (medium programs)
- 6 = Master’s Colleges and Universities (smaller programs)

Doctorate-Granting Universities

Along with undergraduate programs, this category includes “institutions that awarded at least 20 research doctoral degrees, excluding professional degrees such as MD, JD, PharmD, etc...” (Carnegie Classification).

- 7 = Doctoral/Research Universities
- 8 = Research Universities (high research activity)
- 9 = Research Universities (very high research activity)

Various career center practices comprised the dependent variables. Rather than treat them independently from one another, it was more effective to place them into two categories: “Specialized Attention to Students” and “Employer Engagement”. Dominant practices in each category resolve the secondary research question that inquires where career centers direct their attention. The following practices were chosen based on career centers’ dedication to either students or employers. Despite the NACE dataset offering a robust variety of variables, only ten were chosen for this study.

Testing Groups

“Specialized Attention to Students” is an internal investment from the career center:

- Did your office offer career counseling appointments? (Appt_CC)
- Did your office offer workshops on career related topics? (Wrkshps)
- Did your office work jointly with academic departments to offer assistance to students that wanted an internship? (JointAssist)
- Did your office offer academic counseling/advising? (AcademCounsel)
- Did your office offer credit career classes? (CredCareerClasses)
- Budget per full-time equivalent student (Budget_per_student)

“Employer Engagement” focuses on investments that involves external entities such as:

- How many organizations attended career fairs in 2012-2013? (CF)
- Did your office offer a formal on-campus interviewing program? (OCIntrvwProg)
- Do you have a partnership program in which employers make financial contributions to the career center? (PartProg)
- Percentage of operating budgets coming from partnership program (Partner_fees)

Data Analysis

School size was not explicit in the dataset, therefore separate tests were conducted to sense the scale of each school type to use as an independent variable. One test was determining the number of students compared to the number career center staff. An average figure was found by dividing the number of students per professional staff member (Student_to_prof1) by the school type (CarnClassFinal). Institutions with the highest number of students per professional staff member were assumed to be larger compared to others institutions. This was supported by a crosstabulation test on the number of full-time equivalent (FTE) professional staff members (FTEprofRECODE) by school type (CarnClassFinal). Of the 33 respondents reporting 16+ staff

members, 87% belonged to Larger Master's Programs, High Research and Very High Research Universities (Figure 3). This findings were further confirmed by comparing the operating budgets from career centers of different school types. Lastly, these findings were cross-referenced with the dollar amount spent per FTE student (Budget_per_student).

Because the research question seeks to *identify* emerging career center practices this analysis was descriptive. It was also a cross-sectional analysis since the data was collected at once over a large sample size. Follow up research could explore the effectiveness or feasibility of these practices. Table 1 is a basic layout of the examined variables within “Specialized Attention to Students” and “Employer Engagement” as well as the independent variable (CarnClassFinal).

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Carnegie Classification Recoded	704	8	1	9	4.93	2.709
Did your office (or the offices you're reporting for) offer career counseling/advising by appointment?	739	1	1	2	1.02	.136
Did your office (or the offices you're reporting for) offer workshops? (e.g. one-time events on- or off-site covering topics such as resume writing, interviewing skills, etc.)	729	1	1	2	1.08	.264
Did your office work jointly with any academic department or departments on campus to offer assistance to students who wanted to participate in academic or employer offered internships?	728	1	1	2	1.17	.376
Did your office (or the offices you're reporting for) offer academic counseling/advising?	725	1	1	2	1.75	.432
Did your office (or the offices you're reporting for) offer credit career classes?	735	1	1	2	1.67	.469
(A) How many career fairs did you sponsor during the 2012-13 academic year?	647	1199	1	1200	5.56	47.135
Did your office (or the offices you're reporting for) offer a formal on-campus interviewing program?	730	1	1	2	1.36	.481
Do you have a partnership program in which employers make financial contributions to the career center?	618	1	1	2	1.78	.418
2013-14 operating budget	541	3021918	0	3021918	89819.16	204785.829
% of 2013-14 operating budget from Partnership Program	528	60	0	60	1.24	5.476
Operating Budget per Student	522	195.69	.00	195.69	9.6574	15.67669
Valid N (listwise)	384					

2

Table 1: Compiled list of variables tested in “Specialized Attention to Students” and “Employer Engagement” categories. Values 1 and 2 are representative of binary responses (1=Yes, 2=No).

Crosstabulations were used between school type (CarnClassFinal) and practices listed in Table 1. Results were very straightforward for nominal variables. The interpretation of ordinal

² The minimum value of Operating budget per FTE student was reported by one institution in the dataset. It is suspected that either this was incorrectly reported or the office in fact does not financially support students.

and interval variables is more challenging as these data consist of categories that do not possess numeric values. Moreover crosstabulation tests for these variable types could not reveal statistical differences. In such cases one-way ANOVA and Tukey Post-Hoc tests were conducted, providing statistical differences across means and significance levels that further strengthened findings from the initial crosstabulations.

Career centers in large, research heavy schools are anticipated to have the most diverse practices for both students and employers because they have higher operating budgets, more personnel, and often an established reputation that attracts employers all the more. Additionally, schools with employer partnerships and sponsorships are expected to have higher volumes of “Employer Engagement” activities. Smaller schools on the other hand, most likely have a leaner budget that encouraged inward practices like those listed in “Specialized Attention to Students”. To prove these assumptions, three new variables (Sum_Attention, Sum_Engagement, Sum_Practices) were created as summative representations of practices that took place within “Specialized Attention to Students” and “Employer Engagement”. Independent sample t-tests were used between these variables and whether or not they engage in partnership programs with employers (Part_Prog). However because Sum_Engagement includes the partnership program question, a new variable (Sum_Engagement1) was created to exclude it. These analytical methods are intended to determine whether schools with external partnerships have higher levels of employer engagement activities.

RESULTS

Specialized Attention to Students

Among the school types in CarnClassFinal, 98% offered career counseling appointments (Figure 4). These practices typically take place in a one-on-one setting between students and career counselors. This is likely the most specialized career guidance experience students will receive in their university experience. Similarly 93% of responding schools offered workshops on career related topics such as resume writing, cover letter writing, or practice interviewing (Figure 5). At a slightly lower rate, 86% reported collaborating across academic units when helping students attain an internship (Figure 6). This was most prevalent with larger Master's schools. A less popular practice included schools offering career oriented classes that counted for academic credit, which was reported at 34% (Figure 7). Lastly, only 23% of schools offered academic advising services in house (Figure 8).

Of 459 respondents, Very High Research Universities reported the highest career center operating budget with nearly \$225,000 and High Research Universities having the next highest budget (Figure 9). When looking at dollars spent per full-time equivalent student, Baccalaureate Arts and Sciences schools spent nearly \$23 dollars, nearly doubling that of High and Very High Research Universities (Figure 10).

Employer Engagement

High and Very High Research Universities had the highest number of organizations present at their career fairs. Crosstabulations initially demonstrated this pattern but the ANOVA test confirmed it through statistically significant differences across institution types. The most sizable difference in means was between High Research Universities and Master's schools with medium programs ($F=-266.25$, $P<.05$) (Figure 11). The majority of institutions (71%) had a

formal on-campus interviewing program (N=594) and 54% offered specialized career fairs (N=596) (Figure 12 & 13). Employer sponsored financial partnerships were the least common practice. Only 26% reported partaking in such programs. 87% reported no dependence on this program and those that used such partnerships indicated that they made up <2% of their entire operating budget (Figure 14a & 14b). Institutional funding was the highest revenue source for career centers, with 45% of respondents operating entirely from these dollars (Figure 14c).

Using independent sample t-tests, the combined practices in “Specialized Attention to Students” and “Employer Engagement” were separately examined to identify whether schools that had employer partnerships also had higher levels of “Employer Engagement” activities. For both measures of career center practices, there were substantially fewer schools that had partnerships than those that did not. “Specialized Attention to Students” institutions with partnership programs (N=135) were less in number than those without (N=463). As expected those that did had slightly higher means for the number of student centered practices, though not by much (Figure 16a). These results were not found to be significantly different because the 2 tailed significance figure greatly exceeds .05 (Figure 16b).

Of those that said they had partnerships (N=137), the mean value was lower meaning that employer sponsorships does not necessarily mean more “Employer Engagement” activities (N=475). (Figure 17a). The 2 tailed significance level of .000 further supported this (Figure 17b). In sum, institutions with perceivably strong employer partnerships do not necessarily have more “Employer Engagement” practices.

DISCUSSION

Results clearly show that the majority of career center practices occur internally with little employer engagement. Almost all schools offered career counseling appointments and career related workshops where students are given customized attention from internal staff. Unlike Stage 1 and 2 where educational and vocational guidance overlapped, career centers are now found to rarely offer academic advising in their space.

Supplemental to the high frequency of career counseling appointments is the amount of money spent per full-time equivalent student. Evident in the crosstabulation test that examined students per professional staff member (Student_to_prof1) and the number of FTE professional staff members (FTEprofRECODE), research universities have the largest budget and the highest student population (Figure 3). Figure 4 interestingly indicates that despite greater financial resources, research universities spend fewer dollars per student. Given that research universities have over 4,000 students per staff member, it can be inferred that they operate at a much larger scale than the other school types. In contrast the Baccalaureate school with the highest dollar spent per FTE student had less than 700 students per FTE staff member (Figure 15).

Master's schools with larger programs were a unique category in that they comprised the highest frequency of respondents and the highest percentage of cross-departmental collaboration yet simultaneously had one of the lowest total operating budgets and budget per student. Exact reasons for this pattern have not been found, but it could be that these institutions are decentralizing their services as a compensatory measure for funding constraints. Taking these results into consideration, school size is a significant factor to adjust for when analyzing and comparing services across institutions.

Perhaps the most unexpected outcome was that those participating in employer partnership programs do not necessarily indicate higher levels of “Employer Engagement” practices. It was assumed that partaking in this type of program reflects employer related activities, however it could potentially replace such activities. Although the outcome was unexpected, employer engagement is still a very valuable practice for successful career center operations.

Underutilizing employer engagement practices can be detrimental to career centers for a number of reasons, not least of which is the forfeiture of helpful revenue. With nearly 1 in 4 career centers having a formal partnership program, career centers are missing out on a revenue source. This may be a deliberate decision for some career centers, however pursuing those sponsorships would be conducive to fostering connections between students and employers. Seeing as research universities have the highest number of vendors at career fairs as well as the highest operating budget, they may be taking greater advantage of employer funds. Given the continuous increase in tuition as well as the volatile nature of federal funding for universities, career centers may benefit from external revenue sources via employer partnerships.

Employer engagement is also valuable to career centers for information sharing purposes. It is an opportunity for students to discover the needs and norms of the labor market firsthand. Furthermore, it provides career centers with up to date insight of employable skills to incorporate into their counseling practices. McGrath (2002) advocates doing so by bringing employers to campus as guest speakers and including employers in the academic advising process.

CONCLUSION

Limitations of the Study

There were several limitations encountered in this study for both literature and data. In regards to the literature, studies on underemployment are rather outdated and limited in number. With a few exceptions, academic literature subsequent to the 1990's could not be found; those that were found had varying definitions of the term. It would be helpful for future research to have more consistent criteria for underemployment.

The dataset rendered some barriers including the possibility of internal validity of NACE memberships. If institutions are willing to pay for a NACE membership, professional development must be a priority. Despite this limitation, the sample size of the Career Services Benchmark Survey was robust enough to produce findings appropriate for my research.

Another limitation was the inability to explore graduate underemployment further as comprehensive information on alumni destinations would be needed. The Career Services Benchmark Survey asks respondents if they distribute alumni surveys, however the actual destinations of those alumni is not disclosed. Furthermore, the typically low response rate of these surveys provide poor representations this information. Due to these circumstances, the research diverted toward current career center practices, keeping underemployment as the underlying motivation for the study.

To use the NACE survey, identifiable information was removed so as to protect the respondent's identity. Although this was a necessary measure, this analysis would have been much more detailed if the schools were identified. Additionally, the Carnegie Classification system included private and public university status exclusively for Associate's granting institutions. Because this study focused on Baccalaureate institutions and above, this information

was not available. Knowing the status of each school type could have produced interesting observations pertinent to the funding elements of this capstone.

Conglomerating “Specialized Attention to Students” and “Employer Engagement” practices into new variables may have produced different results if each testing group contained the same number of practices. “Employer Engagement” had two activities whereas “Specialized Attention to Students” had five, therefore the results in this study may be skewed (Figure 16).

The final limitation was that the NACE survey data was completed by only one party. Because employer responses were not part of this specific dataset there was a generalizability issue with the findings. Future research could alleviate this by cross-referencing the Career Services Benchmark Survey with another NACE survey completed by employers such as the Internship and Co-op Survey or Job Outlook Survey.

Implications of the Study

As seen throughout this study, funding is a fundamental indicator of where career centers’ interests lie. Results show that career centers receive most of their funding from the institution itself. This can be problematic because funding streams reflect accountability for the career center. If institutional funding is not counterbalanced by employer subsidies, career centers may be inclined to unfairly serve the institution’s interests and consequently overlook the labor market. As an institutional service career centers are unique in that they must cater to affairs within the institutions as well as externally through employer engagement.

Another implication to consider is the quality versus quantity dilemma of large scale institutions. Seeing that research universities have at least 4,000 students per career center staff member and the lowest spending per FTE student, it is fair to question the quality of service they

are giving to students. While research universities tend to be more reputable and therefore more attractive to employers, there may be students in less competitive fields that need more specialized attention from career centers.

Future Recommendations

Funding has inarguably been a dominant focus of this study and we see that career centers are mostly funded from within. With the amount of career counseling appointments taking place in conjunction with the volume of students per professional staff member, consistent funding is of utmost importance to the vitality of this service. Given that federal subsidies towards education has been unpredictable over the last decade, it is advisable that career centers seek out alternative funding streams. Doing so could ensure financial stability in uncertain economic times, and also foster greater employer engagement opportunities for students.

Secondly, results demonstrate a stronger tendency for career centers to have practices take place internally. This was shown in the frequency of appointments, career related workshops, and cross-departmental collaborations. Although this is counter to Dey and Cruzvergara's argument that career centers are in a "Connected Communities" stage, it is imperative that students receive accurate guidance through these practices. Therefore it is recommended that institutions prioritize professional development opportunities for career center staff. This can be accomplished through conferences, expos, and networking events sponsored by professional development organizations such as NACE. Doing so will educate staff on current labor market trends and needs that can relayed in those internal practices.

Emerging practices revealed in this study reflect the "Professional Networking" stage of Dey and Cruzvergara's stages of career center development. If career centers are to be in the

“Connected Communities” stage, more employer engagement is needed. While this is the responsibility of the career center to a point, this recommendation encourages more initiative from employers. Rather than offering positions students are overqualified for or investing as little as possible in a local campus, employers need to provide intentional opportunities that attract university students. Once employers truly invest in a campus, they will see the return through student participation, stronger relationships and trust with the institution, and hopefully a higher retention rate of employed students.

APPENDICES

Figure 1: Underemployment rates of recent college graduates

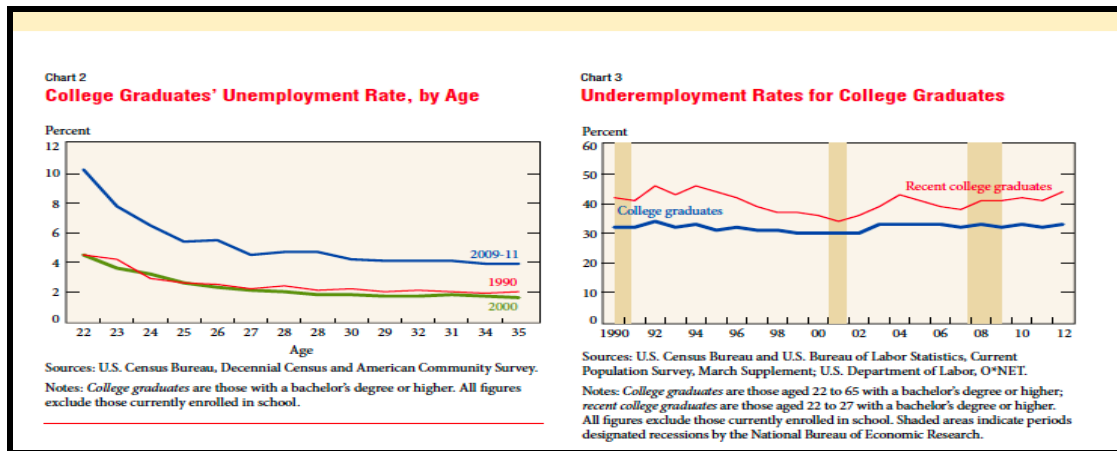


Figure 2: Frequency of respondents

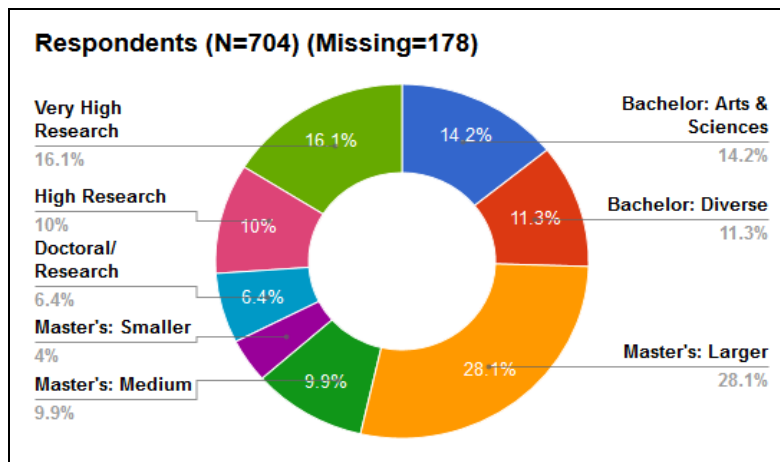


Figure 3: FTE professional career center staff members

of FTE pro staff * Carnegie Classification Recoded Crosstabulation

Count		Carnegie Classification Recoded								Total
		Baccalaureate Colleges-- Arts & Sciences	Baccalaureate Colleges-- Diverse Fields	Masters Colleges and Universities (larger programs)	Masters Colleges and Universities (medium programs)	Masters Colleges and Universities (smaller programs)	Doctoral/Research Universities	Research Universities (high research activity)	Research Universities (very high research activity)	
# of FTE pro staff	Lowest-5	63	50	114	42	18	15	20	13	335
	6-10	12	2	38	2	3	11	15	27	110
	11-15	3	0	6	0	0	4	14	21	48
	16-Highest	1	1	2	0	1	1	5	22	33
Total		79	53	160	44	22	31	54	83	526

Figure 4: Career counseling appointments

Did your office (or the offices you're reporting for) offer career counseling/advising by appointment? * Carnegie Classification Recoded Crosstabulation

Count		Carnegie Classification Recoded								Total
		Baccalaureate Colleges-- Arts & Sciences	Baccalaureate Colleges-- Diverse Fields	Masters Colleges and Universities (larger programs)	Masters Colleges and Universities (medium programs)	Masters Colleges and Universities (smaller programs)	Doctoral/Research Universities	Research Universities (high research activity)	Research Universities (very high research activity)	
Did your office (or the offices you're reporting for) offer career counseling/advising by appointment?	Yes	89	65	176	51	24	35	57	94	591
	No	0	1	3	2	1	1	0	2	10
Total		89	66	179	53	25	36	57	96	601

Figure 5: Workshops on career development topics

Did your office (or the offices you're reporting for) offer workshops? (e.g. one-time events on- or off-site covering topics such as resume writing, interviewing skills, etc.) * Carnegie Classification Recoded Crosstabulation

Count		Carnegie Classification Recoded								Total
		Baccalaureate Colleges-- Arts & Sciences	Baccalaureate Colleges-- Diverse Fields	Masters Colleges and Universities (larger programs)	Masters Colleges and Universities (medium programs)	Masters Colleges and Universities (smaller programs)	Doctoral/Research Universities	Research Universities (high research activity)	Research Universities (very high research activity)	
Did your office (or the offices you're reporting for) offer workshops? (e.g. one-time events on- or off-site covering topics such as resume writing, interviewing skills, etc.)	Yes	61	59	166	44	22	32	56	88	548
	No	5	4	13	8	3	3	1	7	44
Total		66	63	179	52	25	35	57	95	592

Figure 6: Cross-departmental collaboration to assist students with internship

Did your office work jointly with any academic department or departments on campus to offer assistance to students who wanted to participate in academic or employer offered internships? * Carnegie Classification Recoded Crosstabulation

Count			Carnegie Classification Recoded								Total
			Baccalaureate Colleges-- Arts & Sciences	Baccalaureate Colleges-- Diverse Fields	Masters Colleges and Universities (larger programs)	Masters Colleges and Universities (medium programs)	Masters Colleges and Universities (smaller programs)	Doctoral/Research Universities	Research Universities (high research activity)	Research Universities (very high research activity)	
Did your office work jointly with any academic department or departments on campus to offer assistance to students who wanted to participate in academic or employer offered internships?	Yes	Count	72	54	156	47	25	29	45	79	507
		% of Total	12.2%	9.1%	26.4%	8.0%	4.2%	4.9%	7.6%	13.4%	85.8%
No	Count	16	9	22	4	0	5	11	17	84	
	% of Total	2.7%	1.5%	3.7%	0.7%	0.0%	0.8%	1.9%	2.9%	14.2%	
Total	Count	88	63	178	51	25	34	56	96	591	
	% of Total	14.9%	10.7%	30.1%	8.6%	4.2%	5.8%	9.5%	16.2%	100.0%	

Figure 7: Credited career classes

Did your office (or the offices you're reporting for) offer credit career classes? * Carnegie Classification Recoded Crosstabulation

Count		Carnegie Classification Recoded								Total
		Baccalaureate Colleges-- Arts & Sciences	Baccalaureate Colleges-- Diverse Fields	Masters Colleges and Universities (larger programs)	Masters Colleges and Universities (medium programs)	Masters Colleges and Universities (smaller programs)	Doctoral/Research Universities	Research Universities (high research activity)	Research Universities (very high research activity)	
Did your office (or the offices you're reporting for) offer credit career classes?	Yes	20	19	55	12	7	11	27	49	200
	No	69	45	125	39	18	24	30	47	397
Total		89	64	180	51	25	35	57	96	597

Figure 8: Academic advising

Did your office (or the offices you're reporting for) offer academic counseling/advising? * Carnegie Classification Recoded Crosstabulation

Count		Carnegie Classification Recoded								Total
		Baccalaureate Colleges-- Arts & Sciences	Baccalaureate Colleges-- Diverse Fields	Masters Colleges and Universities (larger programs)	Masters Colleges and Universities (medium programs)	Masters Colleges and Universities (smaller programs)	Doctoral/Research Universities	Research Universities (high research activity)	Research Universities (very high research activity)	
Did your office (or the offices you're reporting for) offer academic counseling/advising?	Yes	28	26	40	10	10	10	4	10	138
	No	61	35	136	41	15	25	52	86	451
Total		89	61	176	51	25	35	56	96	589

Figure 9: Operating budget by school type

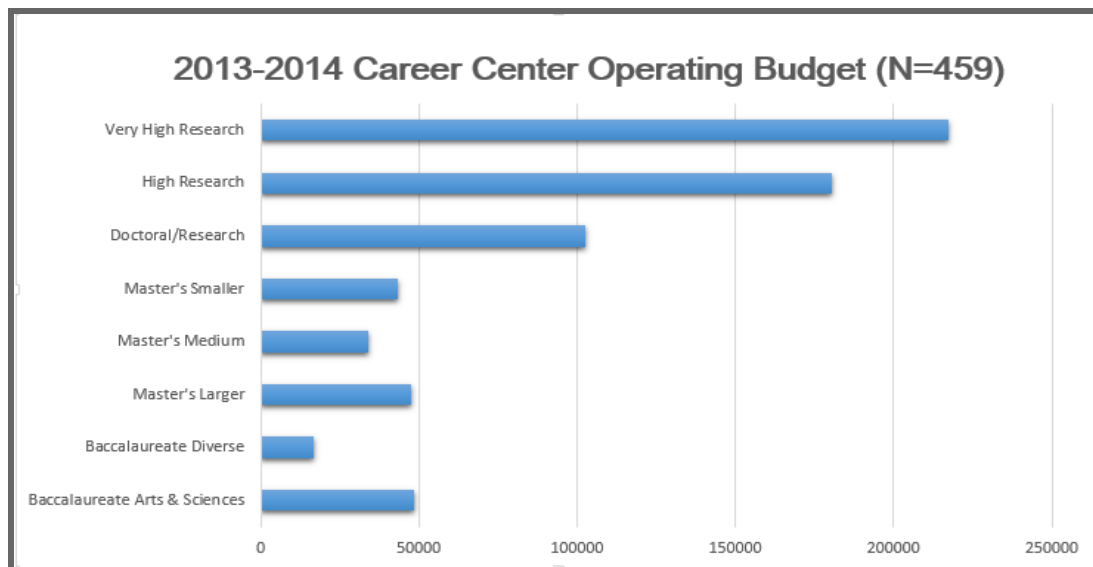


Figure 10: Operating budget per FTE student by school type

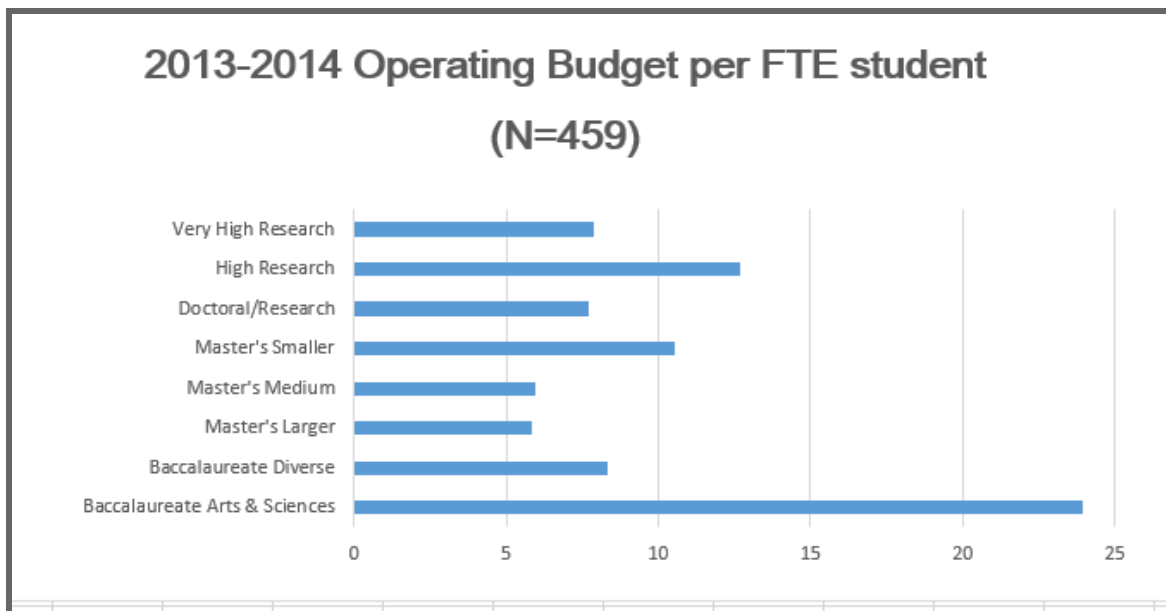


Figure 11: Number of organizations attending career fairs

Multiple Comparisons

Dependent Variable: (B) How many organizations attended your career fair(s) during the 2012-13 academic year? (Two or more divisions of the same organization should be counted once)

Tukey HSD

(I) Carnegie Classification Recoded	(J) Carnegie Classification Recoded	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Baccalaureate Colleges--Arts & Sciences	Baccalaureate Colleges--Diverse Fields	-5.040	35.988	1.000	-114.60	104.52
	Masters Colleges and Universities (larger programs)	-43.358	27.679	.770	-127.62	40.90
	Masters Colleges and Universities (medium programs)	1.115	36.458	1.000	-109.87	112.10
	Masters Colleges and Universities (smaller programs)	-8.765	51.445	1.000	-165.38	147.85
	Doctoral/Research Universities	-59.626	41.114	.833	-184.79	65.54
	Research Universities (high research activity)	-139.217*	35.766	.003	-248.10	-30.34
	Research Universities (very high research activity)	-265.310*	31.117	.000	-360.04	-170.58
Baccalaureate Colleges--Diverse Fields	Baccalaureate Colleges--Arts & Sciences	5.040	35.988	1.000	-104.52	114.60
	Masters Colleges and Universities (larger programs)	-38.318	31.664	.929	-134.71	58.08
	Masters Colleges and Universities (medium programs)	6.155	39.568	1.000	-114.30	126.61
	Masters Colleges and Universities (smaller programs)	-3.725	53.694	1.000	-167.19	159.74
	Doctoral/Research Universities	-54.586	43.896	.918	-188.22	79.05
	Research Universities (high research activity)	-134.177*	38.932	.014	-252.70	-15.66
	Research Universities (very high research activity)	-260.270*	34.710	.000	-365.94	-154.60
Masters Colleges and Universities (larger programs)	Baccalaureate Colleges--Arts & Sciences	43.358	27.679	.770	-40.90	127.62
	Baccalaureate Colleges--Diverse Fields	38.318	31.664	.929	-58.08	134.71
	Masters Colleges and Universities (medium programs)	44.473	32.197	.866	-53.54	142.49
	Masters Colleges and Universities (smaller programs)	34.594	48.519	.997	-113.11	182.30
	Doctoral/Research Universities	-16.268	37.388	1.000	-130.09	97.55
	Research Universities (high research activity)	-95.859*	31.411	.049	-191.48	-2.23
	Research Universities (very high research activity)	-221.952*	25.995	.000	-301.09	-142.82
Masters Colleges and Universities (medium programs)	Baccalaureate Colleges--Arts & Sciences	-1.115	36.458	1.000	-112.10	109.87
	Baccalaureate Colleges--Diverse Fields	-6.155	39.568	1.000	-126.61	114.30
	Masters Colleges and Universities (larger programs)	-44.473	32.197	.866	-142.49	53.54
	Masters Colleges and Universities (smaller programs)	-9.880	54.010	1.000	-174.30	154.54
	Doctoral/Research Universities	-60.741	44.282	.870	-195.55	74.07
	Research Universities (high research activity)	-140.332*	39.366	.009	-260.17	-20.49
	Research Universities (very high research activity)	-266.425*	35.197	.000	-373.57	-159.28
Masters Colleges and Universities (smaller programs)	Baccalaureate Colleges--Arts & Sciences	8.765	51.445	1.000	-147.85	165.38
	Baccalaureate Colleges--Diverse Fields	3.725	53.694	1.000	-159.74	167.19
	Masters Colleges and Universities (larger programs)	-34.594	48.519	.997	-182.30	113.11
	Masters Colleges and Universities (medium programs)	9.880	54.010	1.000	-154.54	174.30
	Doctoral/Research Universities	-50.861	57.257	.987	-225.17	123.44
	Research Universities (high research activity)	-130.452	53.545	.226	-293.46	32.56
	Research Universities (very high research activity)	-256.545*	50.559	.000	-410.46	-102.63
Doctoral/Research Universities	Baccalaureate Colleges--Arts & Sciences	59.626	41.114	.833	-65.54	184.79
	Baccalaureate Colleges--Diverse Fields	54.586	43.896	.918	-79.05	188.22
	Masters Colleges and Universities (larger programs)	16.268	37.388	1.000	-97.55	130.09
	Masters Colleges and Universities (medium programs)	60.741	44.282	.870	-74.07	195.55
	Masters Colleges and Universities (smaller programs)	50.861	57.257	.987	-123.44	225.17
	Research Universities (high research activity)	-79.591	43.714	.606	-212.67	53.49
	Research Universities (very high research activity)	-205.684*	40.000	.000	-327.46	-83.91
Research Universities (high research activity)	Baccalaureate Colleges--Arts & Sciences	139.217*	35.766	.003	30.34	248.10
	Baccalaureate Colleges--Diverse Fields	134.177*	38.932	.014	15.66	252.70
	Masters Colleges and Universities (larger programs)	95.859*	31.411	.049	.23	191.48
	Masters Colleges and Universities (medium programs)	140.332*	39.366	.009	20.49	260.17
	Masters Colleges and Universities (smaller programs)	130.452	53.545	.226	-32.56	293.46
	Doctoral/Research Universities	79.591	43.714	.606	-53.49	212.67
	Research Universities (very high research activity)	-126.093*	34.479	.007	-231.06	-21.13
Research Universities (very high research activity)	Baccalaureate Colleges--Arts & Sciences	265.310*	31.117	.000	170.58	360.04
	Baccalaureate Colleges--Diverse Fields	260.270*	34.710	.000	154.60	365.94
	Masters Colleges and Universities (larger programs)	221.952*	25.995	.000	142.82	301.09
	Masters Colleges and Universities (medium programs)	266.425*	35.197	.000	159.28	373.57
	Masters Colleges and Universities (smaller programs)	256.545*	50.559	.000	102.63	410.46
	Doctoral/Research Universities	205.684*	40.000	.000	83.91	327.46
	Research Universities (high research activity)	126.093*	34.479	.007	21.13	231.06

*. The mean difference is significant at the 0.05 level.

Figure 12: Formal on-campus interviewing program

Did your office (or the offices you're reporting for) offer a formal on-campus interviewing program? * Carnegie Classification Recoded Crosstabulation

Count

		Carnegie Classification Recoded								Total
		Baccalaureate Colleges-- Arts & Sciences	Baccalaureate Colleges-- Diverse Fields	Masters Colleges and Universities (larger programs)	Masters Colleges and Universities (medium programs)	Masters Colleges and Universities (smaller programs)	Doctoral/Research Universities	Research Universities (high research activity)	Research Universities (very high research activity)	
Did your office (or the offices you're reporting for) offer a formal on-campus interviewing program?	Yes	56	30	121	36	12	25	53	89	422
	No	31	33	59	16	13	10	4	6	172
Total		87	63	180	52	25	35	57	95	594

Figure 13: Specialized career fairs

Did your office (or the offices you're reporting for) sponsor specialized career fairs, such as an "exploring majors" fair, or a "liberal arts" fair, etc.? (include consortium-sponsored career fairs.) * Carnegie Classification Recoded Crosstabulation

Count

		Carnegie Classification Recoded								Total
		Baccalaureate Colleges-- Arts & Sciences	Baccalaureate Colleges-- Diverse Fields	Masters Colleges and Universities (larger programs)	Masters Colleges and Universities (medium programs)	Masters Colleges and Universities (smaller programs)	Doctoral/Research Universities	Research Universities (high research activity)	Research Universities (very high research activity)	
Did your office (or the offices you're reporting for) sponsor specialized career fairs, such as an "exploring majors" fair, or a "liberal arts" fair, etc.? (include consortium-sponsored career fairs.)	Yes	40	26	102	29	10	23	33	61	324
	No	48	38	77	23	15	12	24	35	272
Total		88	64	179	52	25	35	57	96	596

Figure 14a: Operating budget from partnership program

Do you have a partnership program in which employers make financial contributions to the career center? * Carnegie Classification Recoded Crosstabulation

		Carnegie Classification Recoded								Total	
		Baccalaureate Colleges-- Arts & Sciences	Baccalaureate Colleges-- Diverse Fields	Masters Colleges and Universities (larger programs)	Masters Colleges and Universities (medium programs)	Masters Colleges and Universities (smaller programs)	Doctoral/Research Universities	Research Universities (high research activity)	Research Universities (very high research activity)		
Do you have a partnership program in which employers make financial contributions to the career center?	Yes	Count	5	5	39	6	3	9	24	42	133
	% of Total		1.0%	1.0%	7.6%	1.2%	0.6%	1.8%	4.7%	8.2%	25.9%
No	Count	72	45	122	35	19	20	27	40	380	
	% of Total		14.0%	8.8%	23.8%	6.8%	3.7%	3.9%	5.3%	7.8%	74.1%
Total		Count	77	50	161	41	22	29	51	82	513
		% of Total	15.0%	9.7%	31.4%	8.0%	4.3%	5.7%	9.9%	16.0%	100.0%

Figure 14b: Operating budget from partnership program

% of 2013-14 operating budget from Partnership Program

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	467	52.9	88.4	88.4
1	7	.8	1.3	89.8
2	14	1.6	2.7	92.4
3	3	.3	.6	93.0
4	1	.1	.2	93.2
5	10	1.1	1.9	95.1
8	1	.1	.2	95.3
10	6	.7	1.1	96.4
12	1	.1	.2	96.6
15	3	.3	.6	97.2
19	1	.1	.2	97.3
20	5	.6	.9	98.3
23	1	.1	.2	98.5
25	2	.2	.4	98.9
28	2	.2	.4	99.2
29	1	.1	.2	99.4
40	1	.1	.2	99.6
55	1	.1	.2	99.8
60	1	.1	.2	100.0
Total	528	59.9	100.0	
Missing System	354	40.1		
Total	882	100.0		

Figure 14c: Percent of operating budget from institutional funding

Budget sustained by institution * Carnegie Classification Recoded Crosstabulation

Count		Carnegie Classification Recoded								Total
		Baccalaureate Colleges-- Arts & Sciences	Baccalaureate Colleges-- Diverse Fields	Masters Colleges and Universities (larger programs)	Masters Colleges and Universities (medium programs)	Masters Colleges and Universities (smaller programs)	Doctoral/Research Universities	Research Universities (high research activity)	Research Universities (very high research activity)	
Budget sustained by institution	0-25%	1	2	16	2	1	4	15	16	57
	26-50%	2	3	8	4	1	2	8	14	42
	51-75%	3	1	22	0	0	3	8	14	51
	76-100%	59	38	97	32	15	17	11	30	299
Total		65	44	143	38	17	26	42	74	449

Figure 14c cont.

% of 2013-14 operating budget from Institutional Funding * Carnegie Classification Recoded Crosstabulation

Statistics Count		Carnegie Classification Recoded								
		Baccalaureate Colleges-- Arts & Sciences	Baccalaureate Colleges-- Diverse Fields	Masters Colleges and Universities (larger programs)	Masters Colleges and Universities (medium programs)	Masters Colleges and Universities (smaller programs)	Doctoral/Research Universities	Research Universities (high research activity)	Research Universities (very high research activity)	Total
% of 2013-14 operating budget from Institutional Funding	100	44	27	64	23	9	10	7	17	201
	99	1	4	3	0	0	0	0	1	9
	98	1	0	1	2	1	1	0	0	6
	97	1	0	1	0	0	0	0	0	2
	96	1	1	2	0	0	0	0	0	4
	95	3	2	5	0	1	2	0	0	13
	94	0	0	3	0	1	0	0	0	4
	93	1	1	0	0	0	0	0	0	2
	92	0	0	1	0	0	0	0	0	1
	90	1	1	6	3	0	1	0	4	16

Figure 15: Number of students per professional career center staff member

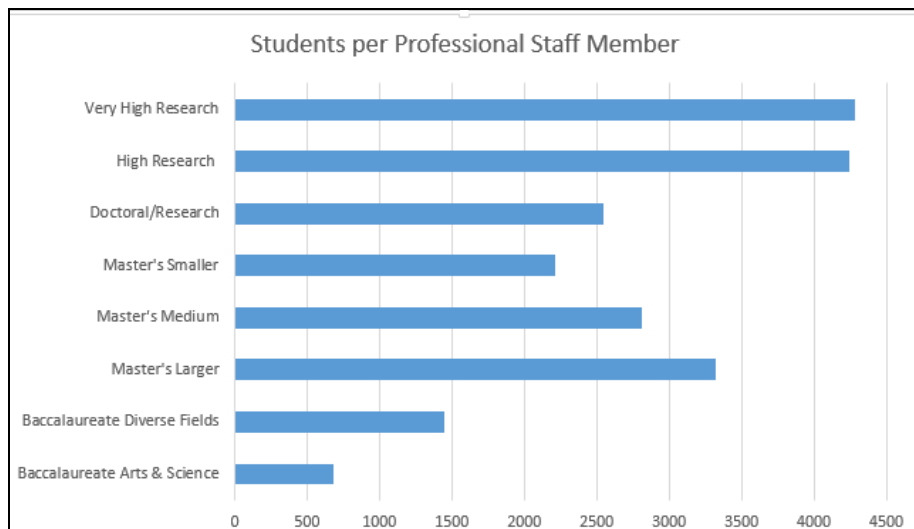


Figure 15 cont.

School Type	Students per Professional Staff
Very High Research	4281.4
High Research	4243.7
Doctoral/Research	2546.6
Master's Smaller	2207.5
Master's Medium	2815.2
Master's Larger	3320.2
Baccalaureate: Diverse Fields	1450.6
Baccalaureate: Arts & Science	682.5

Figure 16: Variable listing for category summation

“Specialized Attention to Students” practices (Sum_Attention)

- Appt_CC: Did your office offer career counseling appointments?
- JointAssist: Did your office work jointly with academic departments to offer assistance to students that wanted an internship?
- AcademCounsel: Did your office offer academic counseling/advising?
- CredCareerClasses: Did your office offer credit career classes?
- Wrkshps: Did your office offer workshops on career related topics?

“Employer Engagement” practices (Sum_Engagement)

- SponsCareerfair: Did your office (or the offices you’re reporting for) sponsor career fairs? (Include consortium-sponsored career fairs.)³
- OCIntrvwprog: Did your office offer a formal on-campus interviewing program?
- PartProg: Do you have a partnership program in which employers make financial contributions to the career center?

Employer Engagement practices for Independent Sample T-Test (Sum_Engagement1)

- SponsCareerfair: Did your office (or the offices you’re reporting for) sponsor career fairs? (Include consortium-sponsored career fairs.)
- OCIntrvwprog: Did your office offer a formal on-campus interviewing program?

Total for both categories (Sum_Practices)

- Appt_CC: Did your office offer career counseling appointments?
- JointAssist: Did your office work jointly with academic departments to offer assistance to students that wanted an internship?
- AcademCounsel: Did your office offer academic counseling/advising?
- CredCareerClasses: Did your office offer credit career classes?
- Wrkshps: Did your office offer workshops on career related topics?

³ This variable was not used in the crosstabulation analyses for Employer Engagement. The number of organizations attending career fairs was included instead.

- SponsCareerfair: Did your office (or the offices you're reporting for) sponsor career fairs? (Include consortium-sponsored career fairs.)⁴
- OCIntrvwprog: Did your office offer a formal on-campus interviewing program?
- PartProg: Do you have a partnership program in which employers make financial contributions to the career center?

Figure 16a: Summation of Specialized Attention to Students practices separated by employer partnership participation

Group Statistics					
Do you have a partnership program in which employers make financial contributions to the career center?		N	Mean	Std. Deviation	Std. Error Mean
Sum_Attention	No	463	3.3153	.84254	.03916
	Yes	135	3.3778	.74179	.06384

Figure 16b: Significance level for Figure 16a

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
Sum_Attention	Equal variances assumed	1.385	.240	-.778	596	.437	-.06244	.08030	-.22015	.09526
	Equal variances not assumed			-.834	243.768	.405	-.06244	.07489	-.20997	.08508

⁴ This variable was not used in the crosstabulation analyses for Employer Engagement. The number of organizations attending career fairs was included instead.

Figure 17a: Summation of Employer Engagement practices separated by employer partnership participation

Group Statistics					
Do you have a partnership program in which employers make financial contributions to the career center?		N	Mean	Std. Deviation	Std. Error Mean
Sum_Engagement1	No	475	.3474	.47664	.02187
	Yes	137	.1022	.30401	.02597

Figure 17b: Significance level for Figure 17a

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
Sum_Engagement1	Equal variances assumed	262.652	.000	5.694	610	.000	.24518	.04306	.16062	.32974
	Equal variances not assumed			7.221	347.135	.000	.24518	.03395	.17840	.31196

Figure 18a: Summation of career center practices (Specialized Attention to Students & Employer Engagement)

Group Statistics					
Do you have a partnership program in which employers make financial contributions to the career center?		N	Mean	Std. Deviation	Std. Error Mean
Sum_Practices	No	460	4.8109	1.10903	.05171
	Yes	135	6.2667	.82136	.07069

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