

**Career Development among College Students:****Determining the Influence of Career Services on Student Persistence to Graduation****Jonathan Hubchen***LSU Department of Agricultural & Extension Education and Evaluation*  
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[vocbur@lsu.edu](mailto:vocbur@lsu.edu)**Abstract**

This study determines how university-sponsored career services influence undergraduate persistence to graduation at a Research University –Very High Research Activity (RU/VH) in the Southern U.S. The target population consisted of undergraduates at that RU/VH and the accessible population included first-time undergraduates who enrolled six years before the study. Five hundred students who used career services and five hundred students who did not use career services were analyzed with data from the Office of the Registrar and the Career Center. The findings indicated that a higher percentage of students who used career services graduated, while most students who did not use career services did not graduate. The Careers2geaux system, job search appointments at the Career Center, college GPA, and gender contributed significantly to the explanatory model. The Careers2geaux system at the institution's Career Center is an online system that helps students to access job postings, manage a job search, find information on career-related activities, find on-campus interviews, and network.

**Key Words:** Career Services, Graduation Rates, Undergraduates, Southern U.S.

## Introduction

It is clear that higher education is essential in supplying the workforce with skilled labor especially in today's knowledge economy. Both individuals and society reap numerous benefits through higher education attainment levels. It is therefore critical that institutions of higher learning take measures to enhance their students' retention to graduation. While numerous studies have been conducted on college students' retention, most of them have focused on the characteristics of students who dropped out of school or transferred to another institution, institutional characteristics that contributed to students' attrition, and retention of specific groups such as first year students, those from minority groups, first generation students, etc. Since the most prevalent reason why students attend higher education is for career development, it is important that institutions of higher learning seek to understand the impact of students' participation in career development activities in enhancing their persistence to degree completion. Career services offices conduct various activities in order to meet college students' educational and career development needs.

The findings from this study add to the body of knowledge on student persistence and retention efforts in institutions of higher learning. Although there are numerous studies on this subject, it is only in recent years that scholars and practitioners started looking at the role of career services in enhancing student's retention (Shoemaker & Krogmann, 2012). Therefore, this study on participation in career services provides another element to the discussion on student persistence. Additionally, this study has implications for practice. The National Association of Colleges and Employers (NACE) professional standards for college and university career services recommend a periodic

evaluation of programs in career services including an assessment of the “career services contribution to or impact on retention and degree completion” (NACE, 2013, p. 36). The results of this study provide data-driven information regarding the role of career services in meeting the institution’s mission and achieving educational goals specifically by verifying the impact of their role in students’ persistence efforts. The results of this study also add value to university administrative decisions regarding resource allocation when higher education faces immense budget cuts. This study facilitates evidence-based decisions regarding a career center’s programs or activities, including those that may require cultivation or reevaluation.

The primary purpose of this study was to determine the influence of participation in university-sponsored career service activities and selected demographic characteristics on the persistence to graduation among undergraduate students at a Research University – Very High Research Activity (RU/VH) in the Southern United States. The primary dependent variable was persistence to graduation as measured by whether or not a student graduated within six years of college entry.

The following objectives were developed to facilitate the accomplishment of this study’s purpose:

- 1) To describe students who entered an RU/VH in a Fall semester and used career services on selected characteristics including demographics, high school performance and college activities.

- 2) To describe students who entered an RU/VH in a Fall semester and did not use career services on characteristics including demographics, high school performance and college activities.
- 3) To compare the group of students who entered an RU/VH in a Fall semester and used career services with the group of students who entered an RU/VH in a Fall semester and did not use career services based on selected characteristics including demographics, high school performance and college activities.
- 4) To determine if a model exists that significantly increases the researcher's ability to correctly classify subjects on whether or not they persist to graduation from selected variables, including demographics, high school performance and college activities, as well as the services of the Career Center.

### **Relevant Literature**

Early research on student persistence and retention indicated several strategies and practices employed by institutions of higher learning to enhance completion rates. Beal and Noel (1980) identified about 20 retention practices and programs, including learning and academic support, expanded orientation programs, career assistance programs, academic advising, curricular developments and co-curricular activities, faculty awareness and development activities. Kendricks et al (2019) advocated the creation of strong supportive networks (such as living-learning communities and intensive faculty mentoring) to increase both retention rates and academic performance. Klepfer et al (2019) wrote that colleges should monitor students' financial health to maximize the effectiveness of student retention initiatives.

Retention practices that were rated as having the greatest contribution to retention, by 1,061 two-year and four-year private and public colleges that responded to the survey, fell into three main categories; first-year programs, academic advising including centers that combined academic advising with career/life planning, and learning support (Habley & McClanahan, 2004).

Career centers provide a range of services, the most common of which is counselling according to a career services benchmark survey for colleges and universities (NACE, 2013; NACE, 2014; Nagle & Bohovich, 2000). Hudson and Kline-Collins (2018) compared traditional career services related to job searches, resume review, and interview preparation with new approaches. These new approaches were related to continuous student engagement, integration into the curriculum, transferrable skills (such as communication and critical thinking), labor market data analysis, employer partnerships and technology-driven career tools.

Although many students experience uncertainty about their academic major and career goals at some point in their college life, when uncertainty is unresolved, it can lead to dropout (Tinto, 1987). This is one area that career services can contribute strategically in retention efforts. Helens-Hart (2019) stated that Career Service Offices (CSO) can help develop students' career identities through promoting career exploration, debunking myths that caused student anxiety and encouraging self-reflection. Clayton et al. (2019) found higher one-year retention rates and four-year graduation rates for students who participated in career service activities relative to those who didn't. Similarly, French (2014) examined retention of first-time students who enrolled in a career exploration course in a community college during 2009-2011 academic years. Results indicated

higher retention for students who attended the career exploration course than those who did not attend the course (French, 2014).

Tinto's model (Tinto, 1987<sup>b</sup>) explains that background characteristics interact and influence development of students' intentions, goals, and commitment to a higher education institution. Such characteristics include social economic status, personal attributes such as race and gender and prior achievements. Tinto's model argues further that goal commitment leads to high academic performance. Accordingly, the interplay of goal commitment and institutional commitment is important in the dropout or persistence decision. Students' success in higher education can be described using Holland's theory of career development (Smart et al., 2006). Thus, both Tinto's model and Holland's theory will be considered as contributors to the conceptual framework for this study.

### **Methodology**

The target population for this study consisted of undergraduate students enrolled at an RU/VH. The accessible population consisted of undergraduate students at one selected RU/VH. Undergraduate students who entered in a specified Fall semester at one selected RU/VH comprised the sample for this study. The sample for this study was taken from approximately 5,000 undergraduate students who enrolled as freshmen at the selected RU/VH in a specified Fall semester. This enabled the researchers to assess the six-year degree completion status of the study participants. The data from the selected institution's Office of the Registrar were merged with the institution's Career Center database to identify whether or not students from the research cohort of freshmen utilized services of the Career Center. For those who did, the specific activities in which they participated were identified. From the merged database, the researchers used a stratified

sampling procedure to select a random sample of 500 students who used one or more of the services provided by the institution's career center and a random sample of 500 students who did not use any services from the institution's career center.

The data were obtained from the selected institution's Office of the Registrar and the Career Center. The Office of the Registrar provided information regarding relevant and available participants' characteristics as identified through a review of related literature and the institution's database. The Career Center provided information of students who utilized career services, the specific activities in which they participated, and information of students who did not use any career services. The information from the Registrar's Office and the Career Center were merged into one database, and all individual identifiers were deleted, making the study completely anonymous to the researchers.

The instrument for this study consisted of a computerized recording form designed by the researcher. The form included relevant variables as identified by the researchers based on a review of related literature and information obtained from the Office of the Registrar and the Career Center of the selected RU/VH. A panel of experts consisting of members of the office of the Registrar and the Career Center reviewed the instrument to validate the accuracy of the variable measurements. As a result, the requested permission for the study was received from the university's Institutional Review Board (IRB).

### **Findings**

The findings are presented by the specific objectives developed for this study.



**Objective 1**

The first objective was to describe students who entered an RU/VH in the Fall semester and used career services on the selected characteristics. Of the 500 students who used career services, females were slightly more ( $n = 287, 57.4\%$ ) than males ( $n = 213, 42.6\%$ ). A majority of the students in this group were Caucasian ( $n = 396, 81.5\%$ ), 10.5% ( $n = 51$ ) were African American, and less than 10% were in other racial groups ( $n = 39, 8.0\%$ ) (American Indian or Alaskan native, Asian, Hispanic, Native Hawaiian or Other Pacific Islander). Fourteen of the participants did not report their race. Almost all the students who used career services had financial aid ( $n = 485, 97\%$ ). The high school GPA ranged from 1.55 to 4.0 ( $M = 3.41, SD = .40$ ). The rank in high school class was a measure of a student's performance in comparison to his/her classmates. As such, it was provided as a rank number out of the total number of students in class. For the purposes of this study, the raw rank number was converted to a "Rank Score" to make a meaningful interpretation. The "Rank Score" was computed by dividing the rank by the total class size and multiplying by 100. The mean rank score in high school class was 25.60 ( $SD = 20.65$ ) with a minimum score of .21 and a maximum score of 95.37. A lower score indicated a higher rank in high school class.

The ACT composite score was available for 448 students in the group that used career services, and their mean score was 25.48 ( $SD=3.54$ ). The minimum score was 11 and the maximum was 34. The mean overall university GPA for the students who used career services was 3.04 ( $SD = .58$ ). Among the 500 students who used career services, 19.4 % ( $n = 97$ ) were first-generation students and 80.6% ( $n = 403$ ) had at least one parent with a college degree or higher. Slightly more than half of the students who used

career services were employed as student employees while in college (n = 259, 51.8%). The majority of the students who used career services were US citizens (n = 488, 97.6%) while the other 2.4% (n= 12) came from countries other than the US. Regarding participation in Greek life, 131 students (26.2%) of the students who used career services participated in Greek life while 369 individuals (73.8%) did not participate in Greek life. There were 13 individuals identified as student-athletes (2.6%) among this group of students who used career services.

A majority of the students who used career services persisted to graduation (n = 434, 86.8%). The departments that had the largest numbers of students enrolled in their last semester were; Biological Sciences (n=30, 6.0%), Mass Communication (n=30, 6.0%), Accounting (n=22, 4.4%), and Mechanical Engineering (n=20, 4%). Students who used career services were reported to use one or more services at the institution's Career Center. The three career services reported to have most participation included use of the Careers2Geaux system (n=383, 76.6%), participation at one or more career events (n=280, 56%), and maintaining resume in the Careers2Geaux system (n=263, 52.6%).

## **Objective 2**

The second objective was to describe students who entered an RU/VH in a Fall semester and did not use career services on the selected characteristics. The findings showed that there were more females (n = 268, 53.6%) than males (n = 232, 46.4%) in the group that did not use career services. Similar to the group of students who used career services, the majority of the students who did not use career services were Caucasian (n = 413, 84.3%) with the African Americans comprising 40 (8.2%) of the participants. The other race groups (Asian, Hispanic, American Indian or Alaskan Native,

and Multi-Racial) made up less than 10% combined ( $n = 37, 7.5\%$ ). Race was not reported by 10 of the study participants. Regarding financial aid, as with the group that used career services, the largest group of the students who did not use career services had financial aid ( $n = 478, 95.6\%$ ). The high school GPA ranged from 1.89 to 4.0 ( $M = 3.29, SD = .41$ ). The mean rank score in high school class was 31.10 ( $SD = 20.78$ ) with a minimum score of .21 and a maximum score of 95.71. As previously mentioned, a lower score indicated a higher rank in high school class.

The mean ACT composite score for 454 students in the group that did not use career services was 24.85 ( $SD=3.50$ ). The minimum score was 14 and the maximum was 35. The mean overall GPA for the students who did not use career services was 2.49 ( $SD = .94$ ). Among the 500 students who did not use career services, 21% ( $n = 105$ ) were first-generation students and 79% ( $n = 395$ ) had at least one parent with a college degree or higher. A larger proportion of the students who did not use career services were not employed as student employee while in college ( $n = 360, 72\%$ ). Similar to the group that used career services, the majority of the students who did not use career services were US citizens ( $n = 493, 98.6\%$ ). Regarding participation in Greek life, the largest group (421, 84.2%) of the students who did not use career services did not participate in Greek life. There were 19 individuals identified as student-athletes (3.8%) among this group of students who did not use career services.

A smaller proportion ( $n = 190, 38\%$ ) of the students who did not use career services persisted to graduation compared to those who did not graduate ( $n = 310, 62\%$ ). The departments that had the largest numbers of students enrolled in their last semester

were: Biological Sciences (n=49, 9.8%), Pre-Nursing Junior Division (n=45, 9.0%), and Kinesiology (n=44, 8.8%).

### Objective 3

The third objective was to compare the group of students who used career services and the group of students who did not use career services on the selected characteristics. Eight of the selected variables were compared using the Chi-square test of independence since they were measured on a categorical scale. The findings from the Chi-square analyses found two of these variables to be statistically significant indicating that they were not independent of whether or not a student used career services (see Table 1).

**Table 1**

*Comparison of Selected Demographic and Academic Characteristics of Undergraduate Students at a RU/VH by Whether or not the Students Used Services of the Career Center*

Characteristic	Statistic $\chi^2/t/df$	Significance
Whether or Not a Student Employee	59.054 <sup>a</sup> /1	<.001
Whether or Not a Greek Member	16.299 <sup>a</sup> /1	<.001
Overall College GPA	11.117 <sup>b</sup> /818.5	<.001
High School GPA	4.844 <sup>b</sup> /985	<.001
High School Rank in Class	4.064 <sup>b</sup> /921	<.001
ACT Composite	2.677 <sup>b</sup> /900	.008

Characteristic	Statistic $\chi^2/t/df$	Significance
Gender	1.462 <sup>a</sup> /1	.227
Whether or not the student had financial aid	1.38 <sup>a</sup> /1	.241
Whether or not a US Citizen	1.34 <sup>a</sup> /1	.247
Whether or not an Athlete	1.16 <sup>a</sup> /1	.281
Race	3.41 <sup>a</sup> /3	.333
Whether or Not a First-Generation College Student	.397 <sup>a</sup> /1	.529

<sup>a</sup> $\chi^2$  Test of Independence

<sup>b</sup>Independent t-test

The first variable was whether or not employed as a student employee while in college ( $\chi^2(1, n = 1000) = 59.05, p < .001$ ). Results showed that the majority of students who were employed as a student worker ( $n=259, 64.9\%$ ) used Career Services while the majority of the students who were not employed as a student worker ( $n=360, 59.9\%$ ) did not use Career Services (see Table 2).

The second variable found to be statistically significant was whether or not the student participated in Greek life ( $\chi^2(1, n = 1000) = 16.30, p < .001$ ). This indicated that whether or not the student participated in Greek life was not independent of whether or not a student used career services. The nature of this association was such that a higher percentage of the students who participated in ( $n=131, 62.4\%$ ) used Career Services than those who did not use career services ( $n=79, 37.6\%$ ).

The statistical significance of these two categorical variables is presented in Table 2.

**Table 2**

*Cross Tabulation of Career Services Use and Selected Predictor Variables of Student Employment and Greek Life Participation*

Variable	Did not use Career Services (n/%)	Used Career Services (n/%)	Total (n/%)
Not a student employee	360 / 59.9%	241 / 40.17%	601 / 100
Student employee <sup>a</sup>	140 / 35.1%	259 / 64.9 %	399 / 100
Did not participate in Greek Life <sup>b</sup>	421 / 53.3%	369 / 46.7%	790 / 100
Participated in Greek Live	79 / 37.6%	131 / 62.4%	210 / 100

<sup>a</sup> $\chi^2(1, n=1000) = 59.05, p < .001$

<sup>b</sup> $\chi^2(1, n=1000) = 16.30, p < .001$

The other categorical variables on which the two groups were compared were not found to be statistically significant. This indicated that they were independent of whether or not a student used career services.

To compare the two groups (those who used career services and those who did not use career services) on the selected variables measured on an interval scale, the independent t-test procedure was used with an a` priori alpha level of 0.05. These

variables included: high school GPA, rank in high school class, ACT composite score, and college overall GPA, and all were found to have statistically significant differences.

For the overall GPA, a statistically significant difference was found ( $t(818.52) = 11.077, p < .001$ ) where the mean overall college GPA for the group of students who used career services was significantly higher ( $M = 3.04, SD = .58$ ) than the mean overall college GPA ( $M = 2.49, SD = .94$ ) for the group of students who did not use career services. A significant difference was also found on their high school GPA ( $t(985) = 4.844, p < .001$ ) such that the mean high school GPA for the group of students who used career services was significantly higher ( $M = 3.41, SD = .39$ ) than the mean high school GPA for the group of students who did not use career services ( $M = 3.29, SD = .41$ ).

When the two groups were compared on the rank in high school class score, a statistically significant difference was found ( $t(921) = 4.064, p < .001$ ). The mean rank score for the students who used career services was lower ( $M = 25.56, SD = 20.65$ ) than the mean rank score for the group of students who did not use career services ( $M = 31.10, SD = 20.78$ ) indicating that students who used career services ranked higher in their high school class than students who did not use career services since a lower rank score indicated that the student ranked higher in their high school class. The independent t-test results of the ACT composite score for the two groups revealed a statistically significant ( $t(900) = 2.677, p < .008$ ) difference such that students who used career services had a higher mean for ACT composite score ( $M = 25.48, SD = 3.54$ ) than students who did not use career services ( $M = 24.85, SD = 3.50$ ).

*Objective 4*

The fourth objective was to determine if a model exists that significantly increases the researcher's ability to correctly classify subjects on whether or not they persist to graduation from selected demographic and academic characteristics and the use of selected services of the Career Center. Binary logistic regression analysis was used to accomplish this objective and revealed a statistically significant model with four predictor variables and correctly classified 85.4% cases of students on their graduation status. The variables which were significant contributors to the model were; a) overall college GPA ( $\chi^2_{(1)}=139.60$ ,  $p < .001$ ) with a positive beta coefficient ( $\beta = 2.62$ ) suggesting that a higher overall GPA is associated with a higher persistence to graduation; b) the use of the Careers2geaux system ( $\chi^2_{(1)}= 84.75$ ,  $p < .001$ ) with a positive beta coefficient ( $\beta = 2.89$ ) indicating that students who used the Careers2geaux system were more likely to persist to graduation; c) gender ( $\chi^2_{(1)}=20.52$ ,  $p < .001$ ) with a significant beta coefficient ( $\beta = -1.06$ ) indicating that male students were less likely to persist to graduation than female students; and d) participation in job search appointments at the Career Center ( $\chi^2_{(1)}=9.51$ ,  $p = .002$ ) with a positive beta coefficient ( $\beta = 2.06$ ) indicating that participation in job search appointments increased the likelihood of persisting to graduation. Of these variables, use of the Careers2geaux system had the highest odds ratio of 17.94 indicating that use of the Careers2geaux system at the Career Center increased the likelihood of persisting to graduation by 17.94 times after controlling for other predictor variables.



Participation in job search appointments at the Career Center also entered the explanatory model and was found to have a significant contribution ( $\chi^2_{(1)}=9.51$ ,  $p = .002$ ) (see Table 3). A positive beta coefficient ( $\beta =2.06$ ) indicated that participation in job search appointments increased the likelihood of persisting to graduation. The odds ratio of 7.88 suggests that the odds of persisting to graduation is 7.88 times greater for students who participated in job search appointments at the center when all other predictor variables are held constant. The explanatory model that classifies subjects on whether or not they persist to graduation from selected variables including the services of the Career Center is shown in Table 3.

**Table 3**

*Logistic Regression Analysis Results of Students' Persistence to Graduation on Selected Variables and Services of the Career Center*

	$\chi^2$		df		P
Model	553.29		4		<.001
Variables in the Equation					
Variable	B	Wald	df	P	Odds Ratio
Overall GPA	2.62	139.60	1	<.001	13.74
Careers2Geau x System	2.89	84.75	1	<.001	17.94
Gender	-1.06	20.52	1	<.001	.35

	$\chi^2$		df		P
Model	553.29		4		<.001
Job Search Appointment	2.06	9.51	1	.002	7.88

### Conclusions, Implications, and Recommendations

Based on the findings of this study, the following conclusions, implications, and recommendations were derived:

*Conclusion 1 - Participation in career services activities had a positive influence on student persistence to graduation as measured by whether or not the student graduated.*

Even though the literature on the influence of career services on student persistence to graduation is scarce, these results are consistent with preliminary findings from an ongoing study indicating that there is a positive relationship between participation in career services activities and factors related to retention (Shoemaker & Krogmann, 2012). The findings are also consistent with other studies which, although did not focus on career services in general, found specific programs at the career services to be associated with increased student retention and persistence. For example, Anderson (2002) found that students who went through career counselling were retained at a higher rate than those who did not; students who used the career Discovery 1 in deciding their majors were retained at a higher rate than those who had declared majors and did not use the career Discovery 1 ( Feduccia, 2003); and first-time students who enrolled in a career exploration course in a community college had a higher retention than those who did not

attend the course (French, 2014). This study adds to the body of knowledge on student persistence and retention efforts in institutions of higher learning. While numerous studies have been conducted on this subject, most studies have focused on the student characteristics, institutional characteristics, specific groups (e.g. first-year students, minority groups, first-generation students, etc.), and specific programs (e.g. summer bridge program and first-year experience). Therefore, this study on participation in career services provides an additional element to the discussion on student persistence.

Existing models on persistence and retention of students in colleges and universities (e.g. Astin, 1984; Pascarella, 1982; and Tinto, 1987<sub>b</sub>) emphasize various important aspects in persistence decision-making such as academic and social integration, institutional and goal commitment, student involvement or engagement, and satisfaction. Based on this conclusion and these findings, the researchers recommend further research on participation in career services activities and/or programs to provide more insight on its influence in making a positive persistence decision. For example, is the persistence decision made out of enhanced goal commitment, increased engagement, or institutional commitment? Is it a direct or indirect relationship to persistence? Both qualitative and quantitative studies should be conducted to further develop a conceptual framework or model that would guide career services efforts and intervention programs on persistence and retention.

This study also has implications for practice. The National Association of Colleges and Employers (NACE) professional standards for college and university career services recommend periodic evaluation of programs in career services to determine how they help to achieve the institution's stated missions (NACE, 2013). This includes an

assessment of the “career services contribution to or impact on retention and degree completion” (NACE, 2013, p. 36). While career services practitioners may be aware of their role in student’s persistence efforts in colleges (Shindell, 2013), results from this study provide verification of the positive impact of their role in persistence efforts and are useful in informing university administration and management.

One possible reason that students do not use career services is a lack of awareness. Based on this conclusion, the researchers recommend development of an “orientation to career services” program and that university administration to mandate its implementation to all undergraduate students. The program should highlight all the services offered at the Career Center and the benefits to increase the career services visibility and attract students who may not be aware of the useful resources provided at the career center. Implementation of this program would expand outreach to include students who may be aware of the services, but who do not know that the services are offered for free to all enrolled students. In addition, this program could attract students who may be reluctant to seek out career services or may have a negative attitude about the career center or the career services offered.

*Conclusion 2 - Students who participated in the career services had higher academic credentials in high school.*

Tinto’s model explains the influence of entry-level characteristics (such as pre-college schooling) on how a student gets integrated into the social or academic system in college (Tinto, 1975, 1987b, 1993). He argued that pre-entry attributes interact with and influence development of initial individual’s intentions, educational expectations and goals, and commitment to the institution creating initial interactions within the academic

and social system (Tinto, 1987b, 1993). On the other hand, career services, through various programs and activities, help students to integrate academically and socially (Shindell, 2013). In view of this, one possible explanation could be students with higher pre-college academic credentials are likely to form positive educational goals and commitment leading them to integrate easily into the university system, including participation in career services.

This conclusion is also consistent with a proposed model for professional development engagement (PDE). Blau and Snell (2013) proposed that precollege attributes (such as SAT/ACT composite score and high school GPA) are positively related to PDE. This is a construct within the student engagement defined “as the level of undergraduate engagement in professional development” (Blau & Snell, 2013, p. 690). Student engagement determines the time and energy devoted to educational and developmental activities such as studying and use of the institutional resources including the career services. Further, student engagement enhances persistence to graduation (Astin, 1984; Blau & Snell, 2013).

Based on this conclusion the researchers recommend that career centers establish institutional partnerships with high schools to proactively engage students at an early stage and form a basis for subsequent engagement once they enroll in college. Such a partnership should highlight the importance of higher education, emphasize the drivers of educational success (such as good grades), and build awareness of the resources on campus. Future research is required in this area especially focusing on each of the pre-college academic attributes and examining how much variance can be explained in student engagement. The study should control for the other pre-attributes such as

personal characteristics (e.g. gender, race) and family background (e.g. social economic status, first-generation) in order to understand the impact of these attributes on the students' engagement.

*Conclusion 3 - A significant and meaningful explanatory model was found for persistence to graduation.*

As discussed in the previous conclusion, overall GPA is an important element in the persistence process (Pascarella, 1982; Tinto, 1993). As for gender, generally female students persist more than male students although variations between persistence for female and male students may take different shapes and usually can be accounted for by other factors, such as marital status, socioeconomic status, and motivation (Astin, 1984; Pascarella, 1982; Tinto, 1993). Other possible reasons include a greater degree of job opportunities for males that do not require degrees and females' earlier academic maturity. Contribution by the use of the Careers2geaux system and the job search appointments could be explained by the level of students' engagement which leads to persistence to graduation. Another possible explanation especially for the contribution by the job search appointments is goals commitment as explained in Tinto's model (Tinto, 1987<sub>a</sub>). Generally speaking, when a person is going for a job search appointment it is an indication of clear career goals. Such an individual is not only committed to achieving the short-term goals of academic success in college but is also focused on long-term goals for job opportunities. Furthermore, having clear career goals leads to enhanced goal commitment and in turn to more positive persistence decisions (Hull-Blanks et al., 2005). This conclusion reinforces the researchers' recommendation for an "orientation to career

services” program and places particular highlights on the Careers2geaux system and the job search appointments as ways to enrich goal commitment.

This finding adds to the literature and offers a basis for further research, which the researchers also recommend, to better improve a model upon which students could be correctly classified on whether or not they will persist to graduation. To build on this model, the researchers recommend inclusion of additional variables that could help to increase percentage of the variance explained in persistence to graduation beyond the 67% achieved in this model, for example, socioeconomic status, hometown location and size, and age. However, with the model correctly classifying 85.4% of the cases of students who graduated or did not graduate this finding has implications on practice as it offers insight to university administration on important contributors to student persistence. The explanatory model contains an academic attribute, a personal attribute, and use of some career services programs.

*Conclusion 4 - The top three career services used most frequently at the institution’s Career Center were the Careers2geaux system, career events, and maintaining a resume in the Careers2geaux system.*

There are several services offered at university career services. The most commonly utilized by career centers, however, is counselling according to the career services benchmark survey for colleges and universities (NACE, 2013; NACE, 2014; Nagle & Bohovich, 2000). In the 2013-14 survey responded by 881 NACE members, 98% offered counselling by appointment, 81 % offered drop-in counseling, and 90% conducted career fairs (NACE, 2014). Other services reported by more than 50% of the

respondents included career workshops, academic and employer internships, on-campus interviewing, work/study programs, career assessment tools, and career resources library (NACE, 2014).

The Careers2geaux system at an institution's Career Center is an online system that helps students to access job postings, manage a job search (e.g. upload a resume, cover letter, etc.), find information on career-related events and activities, find on-campus interviews, and networking. It also allows students and alumni to take a mock interview module right in the comfort of their homes. Being a one-stop system providing a range of resources to students provides a possible explanation why it was the most frequently used type of career services. Furthermore, the convenience of accessing it anywhere anytime makes it convenient for most students.

This finding provides data-driven information to the career services administration and staff on resources that students use frequently. An implication could be to assess the elements that make these most frequently used services popular and assess what can be implemented in other career services programs or activities to increase their participation. Further research is recommended to identify the specific resources that students use most frequently within the Careers2geaux system. A qualitative study would be more useful in order to identify the reasons that make some resources more popular than others within the Careers2geaux system as well as among the other services offered at the Career Center.



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