Student Career Preferences: In Support Of A New Learning Paradigm

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ABSTRACT

According to the Bureau of Labor Statistics, throughout their careers, college graduates change multiple jobs and several careers, often remotely related to one another or to their major field of study. Experts project that the majority of newly created jobs requiring college education would involve extensive and prolonged on-the-job training of new hires, with soft skills gaining more prominence as determinants of professional success. Conversely, over the past several decades, higher education has followed a trend of compartmentalization of college education into narrowly defined disjointed disciplines each with a strict degree program. Such one-size-fits-all educational programs are unlikely to prepare prospective professionals for gainful employment in the emerging economy considering the new success indicators. This study presents a comparative exploratory analysis of accounting students' career preferences by gender, age, grade point average, and academic classification. The study reveals notable differences in career preferences among students enrolled in the same academic program due to differences in gender, age, and academic classification.

Keywords: Accounting Student Career Preferences; New Learning Paradigm

INTRODUCTION

Background

College freshmen seldom have a clear vision or understanding of the skills and life style requirements of the career they wish to pursue. Worse yet, many remain ambivalent about their career of choice well into their junior and senior years. Commonly, therefore, students switch majors in their attempt to identify their career of choice while wasting precious resources in the process. Needless to say, students may complete a degree program that they are not passionate about or are unable to find a suitable employment upon graduation.

The issue of higher education as a global public good as opposed to a conglomeration of private interests has been continually debated through time (Roper et. al., 2005). Nonetheless, considering state of higher education, employment prospects, and global economy, returning to the premise that higher educational institutions should serve as social foundations having both public and private roles is gaining more momentum.

Prospective Employment Opportunities and their Skill Requirements

Emerging career opportunities entail "soft skills" as a prerequisite for success in the workplace (Ketter, 2011). Social intelligence, communication, collaboration, and adaptive thinking are among the skills most associated with career success in many professions. Naturally, the relevant question becomes the extent to which contemporary university curricula prepare students for a prosperous career in a rapidly evolving economic environment? Institutions of higher learning have not been oblivious to the need to incorporate "soft skills" into their curricula. In a study conducted by the Association of American Colleges and Universities, Humphreys notes that nearly 60 percent of the universities surveyed had instituted cultural diversity courses in their most recent curricula transformation projects and many others are expected to follow (1997). More and more, on-the-job

training becomes a viable source of postsecondary education in many industries. Therefore, institutions of higher education must consider imparting skills to students that would enhance their receptiveness and suitability for training and career success as young professionals (BLS, 2010-11).

The drive for efficiency along with changes in the employment market propelled by social, political, and technological metamorphoses, some experts advocate overhauling the conventional education system which carries along a drastic shift in paradigm from teaching to learning (Barr &Tagg, 1995). They emphasize the advantages of the learning paradigm and it being more in line with the skills requirements of the emerging world economies and student preferences.

National unemployment reports reveal a strong relationship between educational attainment and employment; rates of unemployment are lower among those with higher education (Day & Newburger, 2002). In other words, the higher the students' academic credentials, the greater the likelihood of their being gainfully employed. For decades, the majority of the country's middle class did not hold college degrees. Today, sustaining a middle class status and affluence level will not be sustainable without higher education. This becomes apparent when considering that nearly two-thirds of future jobs will require post-high school education and would involve longer on-the-job training periods (BLS, 2010-11). Colleges and universities must urgently re-evaluate the educational programs they offer in light of the type of preparation their prospective alumnae would need.

According to a survey conducted by GFK Roper Public Affairs and Corporate Communications (2011), only five percent of the respondents indicated that the American higher education establishment is doing an excellent job of preparing graduates for their future careers while 58 percent believe that it is doing a fair to poor job. Universities must pay closer attention, not only to feedback from students, but also to the nature of emerging employment opportunities and their expected skills requirements. Universities no longer have the luxury to dictate their perceived skills requirements on efficiency conscious employers.

Curriculum Revisions

Private interests have frequently challenged the conventional view of higher educational system as being a global public good with curricula devised to contain uncontested "timeless truths" (Roper & Hirth, 2005). In response to such challenges, political pressures, and major social and technological advancements, the American university curricula have undergone continual modifications, especially during the recent decades. Although university curricula are prescribed by individual states with heavy participation by national academic subject groups sanctioned by the United States Department of Education, individual entities have undertaken curricula revitalization projects despite inherent obstacles (Lunde et. al., 1995). Factors inhibiting curricular modifications include the role of constituents, social and organizational factors, as well as the behavioral implications of the agents of change (Singha et. al., 1996). Nonetheless, there is no evidence to suggest that such efforts have considered student preferences, their long-term welfare, or alternatives to established teaching paradigms.

Switching Majors

The Chronicle of Higher Education (2001) reports that about 15 percent of entering freshmen would likely change their major before graduation and half as many others are not certain about their chosen discipline. Kroc et. al. (1997) found that nearly 72 percent of freshmen changed their major at one point prior to graduation, some more than once. Whereas, in the past, higher education may have been a vehicle for intellectual advancement and acquisition of knowledge, such may not be the case for many students currently pursuing higher education. While earning a college degree was considered novelty just decades ago, it is unmistakably essential for a successful career in virtually any field. Nonetheless, inasmuch as many students do not have the knowledge and foresight to select a field of study most suitable for their passion, aptitude, and needs, they end up pursuing an educational degree that may not effectively serve them in their life-long career pursuits. The Bureau of Labor Statistics has not maintained long-term data. However, the general consensus is that the average young professional would change seven careers and many more jobs during their first 20 years of employment (see The College of William and Mary Career Center, n.d., as an example). Given that the workplace and the requirements for success therein continually evolve, it is imperative that students adequately prepare for the likely career transitions they could encounter throughout their professional life (Hughey & Hughey, 1999).

Other studies have ventured to identify factors influencing college students' choice of majors with somewhat comparable results (Kaynama & Smith, 1996; Lapan, 1996; Coperthwaite & Knight, 1995; Gabrielsen, 1992). Besides personal interest, job availability and potential career benefits have remarkable influence on the choice of major by business students (Strasser et. al., 2002; Kaynama &Smith, 1996). They further suggest that the factors influencing the selection of the field of study are likely to be different for students in different disciplines.

DATA COLLECTION AND METHODOLOGY

Purpose of the Study

Are college students' career preferences affected by their gender, age, academic classification, or by their GPA? This study attempts to answer these questions through a comparative exploratory analysis of the subjects' career preferences by gender, age, grade point average, and academic classification via a short questionnaire administered in multiple courses in several semesters.

Survey Instrument and Data Collection

Data collection for this study was collected in two phases. In Phase I, 82 sophomore business majors enrolled in three sections of a beginning Managerial Accounting course were asked to access an Internet site (http://www.careerclusters.org/16clusters.htm) sponsored by the Career Clusters Institute listing 503 relevant professions clustered in 16 career groups. Specifically, students were instructed to select three of the 503 careers as their most favorite. Inasmuch as the assignment was voluntary, only 54 of the 82 students opted to complete the assignment and publicly post their preferences on the course's online conference board. Realizing that their choice of careers could be viewed by others enrolled in the course, students were thought to be more diligent in completing the assignment. Of the 54 postings, three were deemed unusable, leaving 51 usable data sets that served the basis for the development of the survey instrument used in Phase II of the data collection. The survey instrument is included at the end of this article.

The 153 careers selected (51 x 3), contained 102 unique choices. The multitude of careers identified may be an indicative of the divergence of career preferences among business majors. Another likely explanation for the wide variety of favorite careers identified by the respondents might be that many listed careers described similar careers choices. For example, "business executive," "general manager," and "administrator" could be used to label a job title in situations where the person is in charge of business operations. Accordingly, the 102 identified careers were grouped into closely related professions and sorted by frequency. Advertising agent, advertising manager, marketing specialist, and sales manager, for example, were combined into the Advertising Manager group. Ten choices with the highest frequencies were then selected and randomly sequenced from 1 to 10 on the survey instrument.

All in all, 452 students in 23 business courses were asked to anonymously complete the survey instrument. Leading to the survey and in preparation for completing the questionnaire, students in each course were encouraged to investigate various professions as to their skill requirements, advancement and growth potential, educational requirements, life style, and other trends.

DATA ANALYSIS

Respondents were asked to rank the 10 careers listed in the questionnaire in order of preference, by assigning a digit from 1 to 10 to each, where 1 indicated the respondent's most favorite and 10 the least favorite career choice, while disregarding potential compensation levels. The survey participants were also asked for demographic data such as gender, age, academic classification, and grade point average. Students were grouped into two academic classifications; sophomore and senior, although the sample contained a few respondents who had identified themselves as junior, graduate, or special students.

Before presenting statistical analysis of the survey data, we present the summary characteristics of the sample population. The gender and academic classification demographics of the 452 survey respondents are presented in Table 1.

Table 1 – Survey Participants by Gender and Academic Classification

	Academic Classification		
Gender	**Sophomore**	**Senior**	**Total**
Female	138	134	272
Male	117	63	180
Total	255	197	452

A pertinent question concerning the survey data could be whether or not there is any indication of student preferences for a particular career regardless of the potentially influential covariates from the list of explanatory variables addressed in the survey? Table 2 presents the summary rankings of each career by all respondents combined. The information is sorted with respect to the "Mean" column indicating that students ranked "Business Executive" as most favorite, "Accountant" as second, and "Coach" as the least favorite professional career. For a discussion of the statistical analysis techniques employed in this article see Kutner et. al. (2004).

A further breakdown of the data reveals that although both genders ranked "Business Executive" as the most favorite career on the list, the rankings of the remaining careers by female respondents remained consistent with the overall rankings in Table 2, except for "Pilot" and "Professional Athlete" with reversed priorities. The male students' rankings agree with those of the females on the most favored - Business Executive – but differed in the rankings of virtually all other careers – see Table 3. This is indicative of possible role of gender in career choices. While male students ranked "Professional Athlete" as their second most favorite profession, the average rankings of the remaining eight careers were around 5.50. This mean ranking closely matches the average ranking for the ten professions combined by all respondents with the exception of "Photography" which is ranked the least favorite by the male students. A favorability ranking matching the average ranking for all professions indicates neutrality by the respondents, meaning that they neither favored nor disfavored the respective profession.

Table 2 - Overall Career Preferences Of All Respondents Combined

Professional Career	Num	Mean	Std Dev	Median
Business Executive	452	3.095	2.219	2
Accountant	452	4.374	3.196	4
Administrative Service Manager	452	5.157	2.451	5
Advertising Manager	452	5.192	2.380	5
Lawyer	452	5.358	2.750	5
Detective / Investigator / PI	452	5.632	2.332	6
Photographer	452	6.077	2.736	6
Professional Athlete	452	6.142	3.122	7
Pilot	452	6.697	2.569	7
Coach	452	7.274	2.526	8

The 452 respondents were grouped as sophomore (255) and senior (197) - there were a few respondents who were grouped with seniors, while they had identified themselves as junior, graduate, or special students. The most favorite career among seniors was "Accountant" with a mean ranking of 2.635 followed by "Business Executive" with mean value of 3.264. For sophomores, on the other hand, "Business Executive" was the most favored career (mean = 2.965) followed by "Advertising Manager" (mean = 4.573). The remaining professions were ranked comparably by the two classes of respondents. Table 4 presents the mean, standard deviation, and median rankings of professions stratified by academic classification.

Table 3 - Summary Statistics by Career Option and Gender

Professional Career	Gender	Num	Mean	Std Dev	Median
Accountant	F	272	3.691	3.131	2.0
	M	180	5.406	3.019	5.0
Advertising Manager	F	272	5.044	2.366	5.0
	M	180	5.417	2.389	5.5
Administrative Service Manager	F	272	4.849	2.254	4.0
	M	180	5.622	2.662	6.0
Business Executive	F	272	2.967	2.107	2.0
	M	180	3.289	2.372	3.0
Coach	F	272	7.746	2.321	8.0
	M	180	6.561	2.660	7.0
Detective / Investigator / PI	F	272	5.478	2.268	6.0
	M	180	5.867	2.414	6.0
Lawyer	F	272	5.290	2.673	5.0
	M	180	5.461	2.867	5.0
Photographer	F	272	5.596	2.560	6.0
	M	180	6.806	2.839	7.5
Pilot	F	272	7.140	2.318	8.0
	M	180	6.028	2.783	6.0
Professional Athlete	F	272	7.199	2.687	8.0
	M	180	4.544	3.062	4.0

Note: F = Female, M = Male

Table 4 - Summary Statistics by Career Choice and Academic Classification

Professional Career	Classification	Num	Mean	Std Dev	Median
Accountant	Senior	197	2.636	2.159	2
	Sophomore	255	5.718	3.221	6
Advertising Manager	Senior	197	5.995	2.245	6
	Sophomore	255	4.573	2.296	4
Administrative Service Manager	Senior	197	5.548	2.427	5
	Sophomore	255	4.855	2.431	4
Business Executive	Senior	197	3.264	2.110	3
	Sophomore	255	2.965	2.296	2
Coach	Senior	197	7.523	2.447	8
	Sophomore	255	7.082	2.574	8
Detective / Investigator / PI	Senior	197	5.401	2.191	6
	Sophomore	255	5.812	2.424	6
Lawyer	Senior	197	5.162	2.763	5
	Sophomore	255	5.510	2.735	5
Photographer	Senior	197	6.142	2.798	6
	Sophomore	255	6.027	2.692	6
Pilot	Senior	197	7.030	2.325	7
	Sophomore	255	6.439	2.720	7
Professional Athlete	Senior	197	6.299	3.167	7
	Sophomore	255	6.020	3.089	6

The preceding analysis of descriptive statistics indicates that the students' preferential rankings may not only be attributable to the professional career, but also to the respondents' gender, and academic classification. Nonetheless, the influence of GPA and age, as quantitative variables, cannot be descriptively investigated mainly because the effect of such variables is best studied through specialized mathematical modeling. In other words, the simultaneous effects of the age and GPA covariates on the ranking of careers would entail thorough investigation involving a statistical model. After exploring various statistical models to explain the rankings as a function of career, gender, academic classification, time-span, GPA, and age of the respondents, a model involving career and the two factor interaction of career with gender, age, and GPA was chosen as the best model since all factors were statistically significant at 5% confidence level, except for the interaction term GPA*career. This variable is only marginally significant with $0.05 < \text{p-value} < 0.10$. Table 5 presents the summary results of the forgoing analysis of variance.

Table 5 - Analysis of Variance – Ranking of Professional Careers

Source	Degrees of Freedom	Sum of Squares	Mean Square	F Value	p Value
Career	9	5,707.518	634.169	99.96	<.0001
Career * Gender	10	1,636.538	163.654	25.80	<.0001
Career * Classification	10	1,316.687	131.669	20.75	<.0001
GPA * Career	10	112.239	11.224	1.77	0.0608
Age * Career	10	158.056	15.806	2.49	0.0056
Error	4,470	28,358.963	6.344		
Corrected Total	4,519	37,290.000			

Based on Table 5, it can be readily concluded that because of the very small p-values, there are highly significant differences in career preferences by various subgroups in the sample. Furthermore, there are highly significant differences across genders when it comes to choices of professional careers. There also seems to be meaningful differences in professional career preferences between sophomores and seniors and students of various ages. In contrast, grade point average seems to have a weak influence in determining career rankings.

To further breakdown the nature of the differences, we first conducted pair-wise comparisons between the Least Squares means of the rankings based on the model corresponding to Table 5, that are summarized in Table 6. The means are ordered from smallest, representing the most favored to the largest, denoting the least favored career. The middle column in Table 6 represents groupings signified by capital letters "A", "B", and "C". For example, careers grouped as "A" have mean ranking differences that are not statistically significant. Similar conclusions can be held for groups labeled "B" and "C" as well. Based on the information contained in Table 6, we note that "Business Executive" is ranked best followed by "Accountant". These two careers are significantly different from each other and the remaining careers as to preferential rankings. These are followed by three groups with some overlaps. However, all careers in group "A" are ranked significantly higher than professions in group "C". "Coach" is ranked the least favorable career by the respondents.

The authors have compared the differences in career preferences between gender groups. These comparisons are summarized in Table 7. The second column in Table 7 labeled "Female – Male" contains the [Mean (female) – Mean (male)] which signifies the excess of the mean ranking by females over that by males. A negative difference shows higher (more favorable) average ranking by females. Based on the values in the difference column and the p-values, we infer that females show higher preference for "Accounting", "Advertising Manager", "Administrative Service Manager", and "Photographer" while males show higher preferences for "Coach", "Pilot", and "Professional Athlete". There are no gender-based preferences for "Business Executive", "Detective / Investigator / PI", or "Lawyer".

Table 6 - Pair-wise Comparison of Ranking Averages

Professional Career	Grouping			LS Mean
Business Executive				3.150
Accountant				4.332
Administrative Service Manager	A			5.302
Advertising Manager	A	B		5.331
Lawyer	A	B		5.362
Detective / Investigator / PI	A	B		5.640
Professional Athlete		B	C	5.855
Photographer			C	6.226
Pilot			C	6.625
Coach				7.177

Table 8 summarizes career preference ranking comparison between seniors and sophomores. The second column contains the differences Mean (senior) – Mean (sophomore). If the ranking difference in the second column for a career is negative and the corresponding p-value is smaller than 0.05, we conclude that a seniors placed a higher preference for that career. Conversely, if such difference is positive and p-value is small we determine that sophomores assigned a higher preference for that career. If the p-value is large, then there is no significant

favorability difference that is explained by academic classification. The results show that seniors demonstrate higher preference for "Accountant" as a career, while sophomores are inclined to favor "Advertising Manager" and "Administrative Service Manager". The analysis reveals that academic classification is not a discriminating factor when it comes to preferential rankings of the remaining professions.

Table 7 – Professional Career Preference Based on Respondent Gender

Professional Career	Female - Male	Standard Deviation	t - value	p - value
Accountant	-1.3101	0.245	-5.34	<.0001
Advertising Manager	-0.553	0.245	-2.25	0.0244
Administrative Service Manager	-0.912	0.245	-3.72	0.0002
Business Executive	-0.340	0.245	-1.39	0.1654
Coach	1.115	0.245	4.54	<.0001
Detective / Investigator / PI	-0.333	0.245	-1.36	0.1755
Lawyer	-0.133	0.245	-0.54	0.5881
Photographer	-1.253	0.245	-5.11	<.0001
Pilot	1.033	0.245	4.21	<.0001
Professional Athlete	2.687	0.245	10.95	<.0001

Table 9 presents the analysis results pertaining to the effect of respondent GPA on career preference. The coefficient column contains the partial coefficient of GPA for each of the ten careers. All other factors remaining constant, if the coefficient for a career is negative and p-value is small, then, increasing GPA will result in higher preference for the respective career. As such, Table 9 reveals that students with greater GPAs have a high preference for "Accountant" and "Lawyer" as careers. In contrast, there is feeble confirmation that people with greater GPA have low preferences for "Advertising Manager" and "Coach" as professional careers.

Table 8 – Career Preference Based On Academic Classification

Professional Career	Senior - Sophomore	Standard Deviation	t - value	p - value
Accountant	-2.728	0.249	-10.95	<.0001
Advertising Manager	1.285	0.249	5.16	<.0001
Administrative Service Manager	0.806	0.249	3.23	0.0012
Business Executive	0.323	0.249	1.30	0.1951
Coach	0.252	0.249	1.01	0.3115
Detective / Investigator / PI	-0.417	0.249	-1.67	0.0943
Lawyer	-0.157	0.249	-0.63	0.5291
Photographer	0.335	0.249	1.34	0.1791
Pilot	0.512	0.249	2.05	0.0401
Professional Athlete	-0.211	0.249	-0.85	0.3971

Table 9 - Impact Of Respondent GPA On Career Preferences

Professional Career	Coefficient	Standard Deviation	t - value	p - value
Accountant	-0.618	0.292	-2.12	0.0343
Advertising Manager	0.5041	0.292	1.73	0.0844
Administrative Service Manager	0.329	0.292	1.13	0.2601
Business Executive	-0.273	0.292	-0.94	0.3498
Coach	0.499	0.292	1.71	0.0879
Detective / Investigator / PI	0.173	0.292	0.59	0.5527
Lawyer	-0.621	0.292	-2.13	0.0333
Photographer	-0.167	0.292	-0.57	0.5667
Pilot	-0.090	0.292	-0.31	0.7572
Professional Athlete	0.266	0.292	0.91	0.3629

Finally, Table 10 summarizes the effect of age on career preference. The interpretation of the results closely resembles those of grade point average. Older students have a high preference for "Accountant" and "Lawyer" as careers while they manifest low preference for "Advertising Manager". Notably, however, there is weak statistical evidence to indicate that older students have low preference for "Professional Athlete" as a career. As for the remaining eight careers, age of the student does not seem to have a profound role in determining the respondents' career preferences.

Table 10 - Impact Of Respondent Age On Career Preferences

Professional Career	Coefficient	Standard Deviation	t - value	p - value
Accountant	-0.040	0.019	-2.09	0.0364
Advertising Manager	0.060	0.019	3.15	0.0017
Administrative Service Manager	-0.008	0.019	-0.43	0.6688
Business Executive	0.020	0.019	1.06	0.2908
Coach	-0.008	0.019	-0.42	0.6772
Detective / Investigator / PI	0.013	0.019	0.66	0.5071
Lawyer	-0.039	0.019	-2.06	0.0395
Photographer	-0.010	0.019	-0.54	0.5862
Pilot	-0.020	0.019	-1.07	0.2847
Professional Athlete	0.033	0.019	1.75	0.0810

SUMMARY RESULTS

Analyses of the survey data reveal that favorite careers are diverse even among students majoring in the same field. They further demonstrate that there are differences among gender groups when it comes to their rankings of favored professions, especially those careers which seemingly not closely related to their educational pursuits. Whereas males view "Coach" and "Professional Athlete" as favorite professions, females rank "Photographer" more favorably among professions outside their field of study. Furthermore, favorite careers shift as students move up in their academic classification from freshman to senior. Finally, not surprisingly, older or returning students' favorite careers correspond more closely with their major field of study.

CONCLUSION, STUDY LIMITATIONS, AND SUGGESTIONS

There are far more careers and distinct job specifications in the real world than there are majors at universities. Many such jobs require post secondary education and require proficiencies such as leadership, flawless execution of instructions, written and oral communication, interpersonal skills, cultural sensitivity, analytical reasoning, computer usage, and high ethical standards, often labeled as soft skills. It is believed that a university graduate with such skills could ideally be trained to become proficient in virtually any career. Universities do not sufficiently emphasize these skills in any coherent curricula perhaps because they lack instructional resources for their effective delivery and measurement.

Although great emphasis was placed on the internal validity of this investigation, we do not claim that its results are robust enough to be the definitive basis for policy development. First, the investigation was limited to accounting students in a single university. Second, the selection of the professions was based on a list of careers published on a website rather than a determination based on observation of the actual careers pursued by college graduates throughout their professional careers. Finally, it asked respondents to disregard compensation levels when identifying their favorite professions. This assumption could prove highly unrealistic and grossly undermine the validity of our findings. We believe that a more robust investigation of whether students pursue academic programs that closely matches their most desired professions should be conducted with a multi-discipline sample. In the event the results of such studies corroborate our findings and it is demonstrated that universities need to prepare their graduates for multiple careers, then, it would imply remarkable implications on curricula development and instructional techniques in higher education.

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Career Preferences Questionnaire
(Anonymous Survey)

Course: _____ Academic Classification: _____

Semester: _____

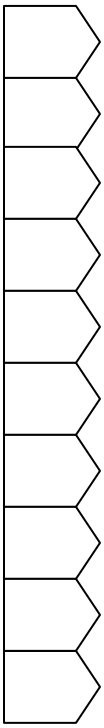
Year: _____

Age: _____

Gender: Male Female

Rank the following TEN Jobs/Careers/Professions in order of desirability (favorability).
Ignore the career's potential compensation level.

Most Favorite = 1 Least Favorite = 10 (Use each number only once)



Pilot

Professional Athlete

Advertising Manager

Lawyer

Accountant

Coach

Administrative Service Manager

Detective / Investigator / PI

Business Executive

Photographer