

A Comparison of Business and Technology Students With Respect To Their Choice of Academic Major

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Introduction

When students select a major, do they *think* before they make the choice or is that a spontaneous decision? In other words, do undergraduate students give importance to the career prospects of their academic discipline and the intellectual challenges posed by the subject matter when choosing their major, or do they simply follow their parents' and friends' advice when choosing their disciplines? Further, are Business students and Technology students similar in their thinking when weighing different factors in the selection of their respective disciplines? The research described in this paper solicited answers to these questions. The study examined the values attached to a *hypothesized* set of factors that might be considered by undergraduate students in the selection of their academic majors. It appeared that, in general, all students in the sample gave higher importance to the financial prospects associated with the academic major, nature of the subject matter and their own aptitude. Also, these students gave relatively lower importance to any influence from their family, friends and high-school teachers. The study then compared the responses of Business students with those of Technology students with respect to the selection of their majors. The findings showed that both groups of students gave similar importance to their career prospects; but the Technology students gave higher value to the nature of the subject and their own capabilities when selecting their particular major.

Background

Past research made various comments about college students and the selection of their academic majors or their career choices. Paolillo and Estes (1982) found that availability of employment was the most important factor to accountants when compared with other professionals. Parental influence was certainly not the most important factor for the accountants in their study. Hafer and Schank (1982) found that financial security was an important factor to undergraduate students in choosing a major. In 1984, Robey reported that college students were more interested about money and careers. Later, Berger (1988) claimed that individuals were likely to select majors with more emphasis on their predictions of *future earnings* as compared to the predictions of *initial earnings* at the time of entering their profession. Bundy and Norris (1992) surveyed accounting students and found that their respondents considered job security as the most important factor to them. In their study, the older students gave more importance to the starting salary. However, in general, the challenging and interesting nature of the work was also important to the accounting students in the sample. Kramer, et al. (1994) hypothesized that most students did not have sufficient information when they chose their academic majors. They found that students who entered colleges did not plan adequately and had no decision-making skills. In

another report, Mariani (1996) found that the career choices of college students were strongly influenced by their parents. The students in Mariani's report also mentioned that they already had thought about their career, either before entering the college or during their college lives. Also, Ahmed et al.'s (1996) results showed that in New Zealand, students who chose professional career in accounting placed great importance on financial aspects of their chosen field.

Since much of the past research made such diverse and sometimes conflicting conclusions about how well undergraduate students think when choosing their majors, the current research gathered fresh data to re-examine the conclusions of the past research. Further, the current research investigated whether money and career were important to only Business students or even non-Business students such as Technology students. The two research hypotheses examined are listed as: (1) Undergraduate students thought well about their majors and had the decision-making ability when choosing their academic discipline; and (2) Business undergraduates and Technology undergraduates were not different from each other in their thinking process when they chose their respective majors.

Collection of Data

This research was conducted at a four-year public university. The enrollment in the university at the time of the collection of data was close to three thousand students. Most of these students were full-time students. Also, several of these students worked in various types of jobs, whether related or unrelated to their academic fields. All students typically chose their specific major in their third year at this institution. Therefore, the subjects of the current study were students enrolled in the upper division courses in Business or Technology. The students had made their decision as to their academic major prior to the collection of data. A questionnaire was constructed using the thirteen factors used by Lowe et al. (1995) to gather students' responses on the importance of those factors in the selection of their academic majors. The students were asked to rank each factor for its importance in the selection of their academic major by using a scale of 1 to 5 where 1 = the factor was *not at all important* while 5 = the factor was *extremely important* to them. Two hundred and ninety-two usable responses were obtained from the survey. Out of those who responded, one hundred and eighty-four students were Business majors, while one hundred and eight students were Engineering Technology majors. The data were then processed using the *two sample t-tests* of significance.

Analysis of Data and Discussion of Findings

The first research hypothesis being examined here was that undergraduate college students weighed certain factors in the selection of their academic majors. Table 1 presents the *mean* ratings given by the respondents to different variables that were hypothesized as being important in the selection of their academic disciplines. The current data showed that all students in the sample placed very high importance on factors such as earning potential (initial and future), career options, self-employment opportunities, nature of the subject matter studied and their own aptitude for the field when selecting their academic major. Also, they placed relatively lower importance on the early influence factors such as advice from friends, parents and high-school teachers. These findings were in agreement with some of the prior literature with the exception of

Mariani (1996) who found that college students' career choices were highly influenced by their parents. Also, the current results questioned Kramer et al.'s (1994) conclusion that students entered college without adequate planning. Certainly, the undergraduate students in the sample had thought about their expected rewards from their career choices. An important observation of the study was that prior work experience was quite important to the undergraduate students in the sample as indicated by the mean rating of 3.5 on a scale of 1 to 5.

<u>Selection Criteria</u>	<u>Mean Value</u>
<i>Professional Expectations</i>	
Future earnings capability	4.52
Career options expectations	4.45
Initial earnings potential	3.97
Self-employment opportunities	3.84
Prestige associated with the major	3.53
<i>Subject Matter Studied</i>	
Interesting subject matter	4.13
Intellectual challenge of the major	3.94
Possess an aptitude in the subject	3.94
<i>Earlier Influences</i>	
Prior work experience in the field	3.57
High school teachers' advice	2.43
Friends' advice	2.20
<i>Family Influences</i>	
Parents' advice	3.07
Parents' profession	2.10

The second part of the research focused on the difference in academic disciplines and the level of importance given to different factors. Specifically, the research question here was whether Business and Technology students attached the same level of importance to various factors in the selection of their respective academic majors. Table 2 presents the importance of each of the selection criteria as reported by both groups of students in the sample.

Table 2

Mean importance given to different major selection criteria by
the Business and Technology students in the sample

Variable	Business Students n = 184	Technology Students n = 108	p-value
<i>Professional Expectations</i>			
Future earnings capability	4.55	4.55	n.s.
Career options expectations	4.43	4.49	n.s.
Self-employment opportunities	3.81	3.89	n.s.
Initial earnings potential	3.91	4.06	n.s.
Prestige associated with the major	3.41	3.73	0.024*
<i>Subject Matter Studied</i>			
Interesting subject matter	4.03	4.29	0.012*
Intellectual challenge of the major	3.84	4.10	0.022*
Possess an aptitude in the subject	3.84	4.13	0.007*
<i>Earlier Influences</i>			
Prior work experience in the field	3.41	3.83	0.009*
Friends' advice	2.13	2.30	n.s.
High school teachers' advice	2.35	2.58	n.s.
<i>Family Influences</i>			
Parents' advice	2.98	3.22	n.s.
Parents' profession	2.04	2.19	n.s.

* indicates significance at 0.05 level

n.s. indicates lack of statistical significance at .05 or .10 level

Table 2 indicates that, in absolute terms, the Technology students gave slightly higher importance to initial financial rewards, career options, and self-employment opportunities associated with their major than the Business students; but the differences were not statistically significant. The Technology students were, however, significantly¹ more influenced by the *prestige* associated with their academic discipline. This was seen from the higher average rating given by the Technology students to the prestige factor associated with their major. Table 2 also shows that in the area of subject matter, the Technology students were significantly more motivated by the nature of the subject matter when compared to the Business students. On the average, the former group of students gave higher importance to all three variables pertaining to the subject matter. Data also showed that both groups of respondents considered the early influence factors

1 The term has reference to statistical significance at $\alpha = .05$.

moderately important or only slightly important in the selection of their academic major. Differences in the means ratings were not statistically significant across the two student groups on the early influence factors. Apparently, both Business and Technology students in the sample were equally independent in their thinking process and considered themselves capable of making their own career choice. This was conflicting with the findings of Kramer et al. (1994) and Mariani (1996) who claimed that college students were not capable of making their own decisions.

Concluding Remarks

The results of this survey indicated that all students considered the importance of certain factors when choosing their academic major in college. However, the students placed different weights on various factors in their career choice. While factors such as monetary outcomes and career prospects were highly important to the students in the sample, they also valued the challenging nature of their own discipline and thought about their own aptitude for the field before selecting the major. Further, in general, these students made their career choices with relatively less input from their friends, families and high school teachers. The lower level of importance placed on early influences highlighted the individualistic side of today's college students. It appears that when recruiting students, the academic programs may have to approach the prospective students directly and stress to them the challenging nature of their field, along with the financial prospects of a professional career such as earnings potential and self-employment opportunities.

The Business students did not put as much importance on the prestige associated with their own major when compared with the Technology students. Although the Technology students were relatively more interested in the prestige of their major, they also gave higher importance to the nature of the subject matter being studied and their own aptitude for the field which was an encouraging finding. It indicated that when the Technology students selected their academic major, they valued what they were going to learn and were not impressed simply by the degree being awarded to them. Also, the Technology students placed a significantly higher value on the prior work experience in the field as against the Business students which was good because it could help them appreciate the knowledge gained through the college education and make the learning process easier for them.

If the above findings create a general perception that college students are driven by the future earnings expectations of their academic field, then perhaps it is justified. After all, education and training are the tools with which students seek to prepare themselves to handle the challenges of today's work environment. Students incur a cost, in terms of money and time, to acquire these tools. Therefore, it is appropriate that they think adequately about the employment prospects of their academic field, whether it is accounting, management, or engineering Technology. One important finding of this study was that undergraduate students did not choose their academic majors simply because of its prestige or the expected future incomes. On the contrary, they thought consciously about their intellectual interests and their own ability before entering their disciplines.

Limitations and Suggestions for Future Research

One limitation of this study was the number of variables chosen for the survey. There may be many other factors that enter the career-selection processes of undergraduate students; but such variables perhaps were omitted in this study. For example, the current study did not consider the grades earned by the respondents in their introductory college courses or the influence of the instructors teaching those introductory courses. Future extensions of this study may include such additional variables as may be important to students in the selection of their academic majors. Further, to examine the extent of any *post-hoc rationalizations* made by the respondents, a comparison may be made between the responses of sophomores who are about to enter the specific majors with those of juniors and seniors who already have committed themselves to their majors. Also, larger samples of students may be obtained to confirm the results of this study.

Appendix

Relevant Portion of the Research Instrument

Please indicate the relative importance of each of the factors mentioned below in your selection of the academic major. Use the following response scale and place the most appropriate number in the blank space to the left of each factor. Please respond to each factor.

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1. Not at all important
 2. Slightly important
 3. Moderately important
 4. Considerably important
 5. Extremely important
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- a. Initial earnings potential
- b. Future earnings capability
- c. Career options expectations
- d. Self-employment opportunities
- e. Prestige associated with the major
- f. Interesting subject matter
- g. Intellectual challenge of the major
- h. Possess an aptitude in the subject
- I. Parents' advice
- j. High school teachers' advice
- k. Friends' advice
- l. Prior work experience in the field
- m. Parents' profession

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Note: Names appear in the alphabetical order. Both authors have contributed equally to the paper.