

Factors Influencing the Selection of a Major: A Comparison of Pharmacy and Nonpharmacy Undergraduate Students

William B. Lobb

Mansi Shah

E. M. Kolassa

ABSTRACT. To increase the number of applications and qualified applicants, schools and colleges of pharmacy may be forced to target a different set of high school and college students. It is important to identify differences between current pharmacy students and current nonpharmacy students. This identification may increase the ability to recruit students who currently do not consider or choose pharmacy as a major/career. Students were surveyed to examine potential differences between the influences on pharmacy and nonpharmacy students' major selection. Among the factors evaluated were financial aid, previous education, potential career/degree characteristics, and information sources. There exists a difference between pharmacy and nonpharmacy students in several areas. Areas such as information sources consulted and sources of funding may identify nontraditional avenues of recruitment that can increase the awareness of pharmacy as a potential major. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2004 by The Haworth Press, Inc. All rights reserved.]*

William B. Lobb, R.Ph., is a graduate student in the Department of Pharmacy Administration, School of Pharmacy, University of Mississippi, Faser Hall, P.O. Box 1848, University, MS 38677-1848. Mansi Shah, B.S., is a graduate student in the Department of Pharmacy Administration, School of Pharmacy, University of Mississippi. E. M. Kolassa, Ph.D., was Associate Professor, Department of Pharmacy Administration, School of Pharmacy, University of Mississippi, at the time this study was conducted. Dr. Kolassa is currently Managing Partner, Medical Marketing Economics, LLC, 1223 Jackson Avenue, Suite 301, Oxford, MS 38655.

Address correspondence to Mr. Lobb.

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INTRODUCTION

According to the American Association of Colleges of Pharmacy, the number of applications received by pharmacy schools peaked in 1994 with approximately 34,000 applications. This is almost 50% more than the number of applications received in 1999. In 1999, the schools and colleges received only 23,000 total applications (1). By the 2000-2001 academic year, the number of applications received had increased to 26,265 (2). Yet anecdotal evidence indicates a decrease in the number of applicants who meet or exceed minimum standards. Even with the recent increase, the number of applications is significantly lower than 1994 levels. That fact, coupled with an increase in the number of schools and colleges of pharmacy, means that it is important to increase the number of students who consider pharmacy as a potential major and career.

In recent years, these trends in applications for admission have also been evident at the School of Pharmacy at the University of Mississippi. There are a number of possibilities for this decline, including the adoption of a six-year degree program, which may have had some effect on students' selection of pharmacy as a degree choice. Based on a recent in-house survey, less than 50% of the current pharmacy students have previous pharmacy experience. In addition, awareness of the profession of pharmacy by the public is low (3). This research was performed in an effort to understand some of the factors that lead students to choose (or not choose) pharmacy as a degree at the University of Mississippi.

BACKGROUND

There is a substantial body of research that has investigated the personality traits and other characteristics of students of pharmacy. Personality characteristics have been used to predict academic performance. Lowenthal and Meth reported that introverted, intuitive pharmacy students tended to perform better academically and that this pattern was also true for nonpharmacy students (4). Shuck and Phillips studied pharmacy students' personality characteristics over a ten-year period at Drake University, comparing pharmacy students with the general college population and finding differences between the groups (5). The authors determined that pharmacy students displayed different personality types than those in other majors. A majority (53%) of the pharmacy students

were introverted, and the ISTJ, ISFJ, ISTP, ESTJ, and ESFJ (E-I Extraverted/Introverted, SN-Sensing/Intuition, TF-Thinking/Feeling, JP-Judging/Perception) personality types occurred more often in the pharmacy students (5). Rezler et al. compared the personality characteristics of pharmacy and medical students and found that the two disciplines attracted different personality types. Medical students were found to be more intuitive (N) compared to pharmacy students, who were more sensing (S). The authors noted that the profession was attracting students who were ready for the drug distributive processes of pharmacy (6).

Of the previous research that investigated the selection of the pharmacy major, most emphasized the implications for the education of pharmacists rather than the recruitment of potential pharmacists. Although some compared the pharmacy samples with the general population of college students, they did not evaluate demographic or motivational differences between the two groups. Studies that did evaluate reasons for the selection of the pharmacy major did not compare the pharmacy student sample with the general undergraduate population.

From a marketing perspective, schools or colleges of pharmacy can benefit from a definition of a student base that is predisposed to both the selection of pharmacy as a major and for success in the course work. With a proper targeting of precollege students, more students might consider a pharmacy major and career, increasing the numbers of both applications and qualified applicants. The purpose of this research was to investigate differences in influence sources, career characteristics, and program characteristics between pharmacy and nonpharmacy students at the University of Mississippi, a southern state-funded liberal arts university offering a variety of majors, to determine reasons for not choosing pharmacy as a major and the success and potential usefulness of recruitment techniques.

METHODS

To address these issues, a survey instrument was created (Appendix). Questions were generated by consulting with the Dean of Admissions at the School of Pharmacy and with students through a focus group session. The questions concerning parental employment were based upon U.S. Census designations. Following completion of the survey, the instruments were reviewed for completeness by Department of Pharmacy Administration faculty mem-

bers and graduate students. The instrument was pretested with a small sample of pharmacy and nonpharmacy students at the University of Mississippi.

Following the development of the survey instrument, two samples of students at the University of Mississippi were drawn: pharmacy and nonpharmacy. The pharmacy student sample consisted of the first and second (equivalent to junior and senior level students) year students at the School of Pharmacy. The students were surveyed in the spring semester of 2000. Surveys were distributed during required classes for each year, Introduction to Pharmacy and Pharmacy Law. One hundred fourteen pharmacy students responded to the survey out of a total of 135 students enrolled in those 2 classes.

The nonpharmacy student sample was drawn from a simple random sample of classes from the spring 2000 course schedule. Following the selection of the sample of courses, the professors in charge of each class were contacted for permission to survey their classes. Twelve out of thirteen agreed to participate. The final nonpharmacy sample size was 112 students out of approximately 10,000 undergraduate students (7).

The surveys explored a number of items. Among them were questions attempting to determine the strength of certain influences on undergraduate major selection. The sources of influence evaluated were sources of funding, information source type, potential career influences, and degree program influences. Sources of funding questions addressed scholarships, loans, other financial aid, work-study, job, and family as sources for funding. The questions concerning sources of information included parents, other family members, high school teachers, college professors, coworkers/job, books and other printed materials, friends, Internet, and guidance counselors. Questions concerning career characteristics assessed prestige, earning potential, flexibility of schedule, availability of jobs, flexibility of career (ease of change within career), flexibility of location, family tradition, fringe benefits, and type of work. Degree-specific characteristics assessed were financial aid, size of program, difficulty of course work, reputation of program, program options (multiple tracks/majors), quality of faculty, length of program (time to graduation/employment), entry requirements, and flexibility of curriculum.

In addition, the surveys explored each student's employment history and participation in extracurricular activities during high school. This was done to examine for tendencies that may have been related to introverted and extroverted behavior. Extracurricular activities included varsity athletics, drama, debate/mock trial, student government, honor society, band/music, and did not participate categories. Employment history may also give insight into background differences between pharmacy and nonpharmacy students. When examining previous employment, a number of job choices were offered, in-

cluding grocery/food, restaurant, other retail, manufacturing/production, pharmacy, medical clinic/hospital, law firm, and farm/agriculture.

Both the pharmacy and nonpharmacy students evaluated the appeal of other health care professions, namely medicine and nursing. Other health professions were not assessed. The influence of different information sources and future career characteristics on major selection was assessed using seven-point Likert-type scales. Among these characteristics were career prestige, earning potential, flexibility of career, and availability of jobs. Questions were added to the nonpharmacy student survey to address whether those students considered pharmacy as a major, to determine the reasons why or why not, and to assess their current academic designation (junior, senior, etc.). Responses were analyzed using chi-square and analysis of variance for mean differences.

The ultimate purpose of this research was to assist in marketing the University of Mississippi School of Pharmacy to potential students. The goal was to increase the number and quality of applicants to the program by understanding the differences between pharmacy and nonpharmacy students.

RESULTS

There was no difference between the two groups based on general employment history. However, more pharmacy students had worked in a pharmacy ($p < 0.05$, 30.7% of pharmacy students and 0.9% of nonpharmacy students), and more nonpharmacy students had worked in a restaurant (chi-square, $p < 0.05$, 20.0% of nonpharmacy students and 10.5% of pharmacy students). No other previous work experiences showed significant differences.

The differences between the two student groups with respect to high school activities were also evaluated. Of the activities, several had significant differences. More nonpharmacy students participated in varsity athletics. Sixty-two percent of the nonpharmacy students participated in varsity athletics compared to 47% of the pharmacy students. More pharmacy students had belonged to an honor society (chi-square, $p < 0.05$, 79.8% of pharmacy students versus 37.5% of nonpharmacy students) and participated in the band or choir (chi-square, $p < 0.05$, 32.5% of pharmacy and 18.8% of nonpharmacy students).

In examining prior education and students' selection of a major, the groups were asked what their current major was and how many majors they had considered before selecting their final major; only one student did not report a current major. Pharmacy students considered fewer majors than nonpharmacy majors. Forty-eight percent of pharmacy students considered a major other

than pharmacy, while 78.1% of nonpharmacy students considered more than one major (chi-square, $p < 0.05$).

In contrast to the opinions of the pharmacy students, 82% of the nonpharmacy students did not consider pharmacy as a major. Of those who did consider pharmacy as a major, some listed difficulty of the course work, time required to achieve the degree, and a low level of interest as reasons for not choosing a pharmacy major.

The surveys then asked about the students' experience with previous higher education. Pharmacy students had attended some institution (either two-year or four-year) of higher learning 64.9% of the time. This percentage was significantly greater than for the nonpharmacy students (21.6%). A similar pattern was found when exploring community college and four-year attendance directly (Table 1).

Both pharmacy and nonpharmacy students were given the task of identifying the sources of funding for their current education. Each respondent was asked to state the percentage of total funding that each funding source provided. Significant differences were only found in the percentage of funding through student loans and family sources. Family provided almost 50% of funds for the nonpharmacy student sample versus 22% of pharmacy students' funds (ANOVA, $p < 0.05$), while student loans provided almost 35% of funds for the pharmacy students and only 14% of the funds for the nonpharmacy students (ANOVA, $p < 0.05$).

Eighty-five percent of the pharmacy students rated the M.D. as an appealing career compared to only 35% of the nonpharmacy students ($p < 0.05$). The appeal of a nursing career was not statistically different for the 2 groups: 26.3% of pharmacy students and 18.9% of nonpharmacy students found a nursing career appealing. Pharmacy students were influenced more by their coworkers/employment situations, and nonpharmacy students were influenced by books and other printed materials ($p < 0.05$).

TABLE 1. Percentage and Number of Students Who Attended Another Institute of Higher Learning.

	Attended College Before Current School		Community College		Four-Year College	
	No % (n)	Yes % (n)	No % (n)	Yes % (n)	No % (n)	Yes % (n)
Pharmacy <i>n</i> = 114	35.1% (40)	64.9% (74)	53.6% (60)	46.4% (52)	72.3% (81)	27.7% (31)
Nonpharmacy <i>n</i> = 112	78.4% (87)	21.6% (24)	86.5% (96)	13.5% (15)	84.7% (94)	15.3% (17)

Several career characteristics had greater influence on pharmacy students. Among them were career prestige, earning potential, flexibility of career, and availability of jobs. These differences are illustrated in Table 2. All mean scores reported by pharmacy students were higher than those of the nonpharmacy students (ANOVA, $p < 0.05$).

Pharmacy students were influenced more by the reputation of the scholastic program than their nonpharmacy counterparts. Each group assessed the characteristics of the scholastic program it had chosen and the influence the characteristics had upon selection of a major (Table 3).

In addition to the comparisons to nonpharmacy students, the pharmacy students were asked to evaluate the current level of the quality and accessibility of information available about the University of Mississippi pharmacy program. Students thought that there was plenty of information available (mean = 5.58) but that little of it was provided by high school counselors (mean = 2.31) or community college counselors (mean = 3.10). The questions were seven-point Likert-type scales, and the results are reported in Table 4.

TABLE 2. Mean* Ratings of Career Characteristics.

	Pharmacy**	Nonpharmacy
Prestige	5.27	3.83
Earning potential	5.92	4.44
Flexibility of schedule	5.34	4.36
Availability of jobs	6.22	4.70
Flexibility of career	5.11	4.55
Flexibility of location	5.48	4.72
Fringe benefits	4.62	3.35

*Mean on a seven point scale

**All differences significant ($p < 0.05$)

TABLE 3. Mean* Influences of Specific Program Characteristics.

	Pharmacy**	Nonpharmacy
Financial aid	3.47	2.71
Difficulty of course work	4.02	3.50
Reputation of program	5.55	4.19
Entry requirements	4.15	3.15

*Mean on a seven-point scale

**All differences significant ($p < 0.05$)

TABLE 4. Responses from Pharmacy Students on Information Levels and Sources.

	Mean*
There is plenty of information available about the profession of pharmacy.	5.58
The information available about the profession of pharmacy is useful to those considering a pharmacy career.	5.32
Before attending the University of Mississippi, it was easy to find information on the profession of pharmacy.	4.77
Before attending the University of Mississippi, it was easy to find information on college of pharmacy programs.	4.89
High school guidance counselors provide information on pharmacy programs.	2.31
Community college guidance counselors provide information on pharmacy programs.	3.10
It was easy to find information on the University of Mississippi College of Pharmacy.	5.17
I felt the University of Mississippi School of Pharmacy wanted me to come to school here.	4.81
Before attending the University of Mississippi, it was easy to communicate with the University of Mississippi School of Pharmacy.	4.88
I would encourage others to apply to the University of Mississippi School of Pharmacy.	4.86
I would encourage others to apply to any college of pharmacy.	5.08

*Mean on a seven-point scale

DISCUSSION

Pharmacy students and nonpharmacy students at the University of Mississippi differ markedly on many personal characteristics and potential influences on major selection. Differences in extracurricular activities and employment history may be consistent with previous research that describes the pharmacy student as typically more introverted in nature. In marketing of a pharmacy program, it appears quite possible that a number of characteristics of pharmacy are potentially attractive, especially in light of the current pharmacist shortage. However, the lack of consideration of pharmacy as a potential degree could be the result of a lack of public awareness among students at this institution.

The students in the two groups appeared to use different criteria for their selection of a major. As demonstrated by the number of majors considered, pharmacy students were more targeted to the choice of a major. This could be a function of age, the major itself, the type of funding depended upon, or any combination of these factors.

In targeting potential pharmacy students, it is important to recognize their motivations, the information sources that they consult, the influences of career characteristics, and program characteristics. Information should educate potential students on the advantages of a pharmacy career, in high school and be-

yond. Current students thought that the level of information available was above average and easy to locate but that this information was not coming from guidance counselors at either the high school or community college level. With the majority of the students in the sample attending another institution before attending the University of Mississippi School of Pharmacy, perhaps it is important to educate these counselors on the merits of the profession.

The differences between the resources consulted prior to major selection were markedly different. If the goal of promotion of a pharmacy program is to be included in more students' consideration sets, it is imperative that information be placed in books and printed materials typically consulted.

Career prestige, earning potential, flexibility of career, and availability of jobs had greater influence on pharmacy students. While intuitively obvious, this solidifies the power of the perceived pharmacist shortage in driving recent increases in the number of applications received.

LIMITATIONS

This study was conducted using students at the University of Mississippi. The sample, while random, does not represent students outside of the university. In drawing the random sample of nonpharmacy students, only one science course was selected. Future work may need to target only those majors that are math/science oriented. Because of this, the exploration of the competitive advantages of a pharmacy major and a pharmacy degree to University of Mississippi students remains incomplete.

Pharmacy students' pre-pharmacy course work was not adjusted in the assessment of the schools attended. The fact that pharmacy students attended a school prior to the University of Mississippi may be an artifact of early major selection and not a pure source of potential pharmacy students.

The quality and availability of information about the School of Pharmacy at the University of Mississippi was not assessed among nonpharmacy students. No information is available as to whether these students saw such information. In addition, this removes the ability to compare pharmacy students' impressions of the information to those of nonpharmacy students.

CONCLUSION

The School of Pharmacy at the University of Mississippi has the ability to target potential pharmacy students early in their academic careers. While anecdotally and historically students with pharmacy experience are drawn by

the potential of pharmacy as a career and a large number of applicants have had some pharmacy work experience, it is important to expand beyond these students by enlisting pharmacy alumni as recruiting officers. Relationships with high schools and community colleges should be improved and used state-wide. Marketing of pharmacy as a career and the University of Mississippi School of Pharmacy as a potential education path must be increased. Methods for this increase could include brochures and pamphlets, an increased World Wide Web presence, CD-ROMs, and working with schools to target potential pharmacy students with individualized information (active recruitment).

It is important to note that the competitive set for a school or college of pharmacy has two layers. First, a school competes with the other programs of pharmacy regionally and across the nation. Second, it competes with other degrees and majors, typically based on the attractiveness of future career paths. It is obvious that at the University of Mississippi students not enrolled in the pharmacy program are largely unaware of the profession of pharmacy. This implies that the second competitive set is the more important target.

As the only university in Mississippi with a school of pharmacy, the University of Mississippi is in a unique position because the immediate competition from other schools and colleges may be cost prohibitive and distant. However, it is apparent that the competitive set includes other majors as well. The school must use the current academic program and the career advantages within the profession of pharmacy that future students perceive as key recruiting points and essential selling points for attending pharmacy school. More importantly, awareness of the profession of pharmacy must be created within the state and beyond. This will increase the applicant pool by making more potential students familiar with the pharmacy profession, its advantages, and its degree programs.

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APPENDIX

Pharmacy Student Survey

The following is a survey to better understand the selection of major by students at Ole Miss. It should only take five to ten minutes to complete. All of your responses will remain confidential. Thank you for your thoughtful completion of this questionnaire.

1. Did you attend another institution of higher learning before attending Ole Miss? Yes No

If yes, which?

Community College _____

Another 4-year college _____

Other _____

2. Did you consider other schools in addition to Ole Miss? Yes No

If yes, which? _____

3. Were you employed before attending Ole Miss? Yes No

If yes, where?

Grocery/food

Restaurant

Other retail

Manufacturing/production

Pharmacy

Medical clinic/Hospital

Law firm

Other Professional _____

Farm/agriculture

Other _____

4. What extracurricular activities did you participate in while in high school?

Varsity Athletics

Drama

Debate/Mock Trial

Student Government

Honor Society

Band/Music

Did not participate

Other _____

APPENDIX (continued)

5. What percentage of your education is paid for by each of the following sources? (Please add the categories to 100%)

Source of funds	%
Scholarships	
Loans	
Other Financial Aid	
Work Study	
Job	
Family	
Other _____	
	100%

6. What is your current major? _____

7. Since arriving at Ole Miss, how many times have you changed your major? _____

8. What other majors did you consider? _____

9. On a scale from 1 to 7 (1 = No influence and 7 = Strong influence), please rate the influence that each source of information had on your selection of your current major.

	No Influence					Strong Influence	
	1	2	3	4	5	6	7
A. Parents	1	2	3	4	5	6	7
B. Other family members	1	2	3	4	5	6	7
C. High school teachers	1	2	3	4	5	6	7
D. College professors	1	2	3	4	5	6	7
E. Co-Workers/Job	1	2	3	4	5	6	7
F. Books and other printed materials	1	2	3	4	5	6	7
G. Friends	1	2	3	4	5	6	7
H. Internet	1	2	3	4	5	6	7
I. Guidance counselor	1	2	3	4	5	6	7
J. Other (specify) _____	1	2	3	4	5	6	7

10. Of those sources provided above, which one was most influential in selecting your current major? _____

11. On a scale from 1 to 7 (1 = Not at all important and 7 = Very important), please rate how important each of these characteristics of your intended career were for the selection of your current major.

	Very Important						Not at all Important
	1	2	3	4	5	6	7
A. Prestige	1	2	3	4	5	6	7
B. Earning potential	1	2	3	4	5	6	7
C. Flexibility of schedule	1	2	3	4	5	6	7
D. Availability of jobs	1	2	3	4	5	6	7
E. Flexibility of career (Ease of change within career)	1	2	3	4	5	6	7
F. Flexibility of location	1	2	3	4	5	6	7
G. Family tradition	1	2	3	4	5	6	7
H. Fringe benefits	1	2	3	4	5	6	7
I. Type of work	1	2	3	4	5	6	7
J. Other (specify) _____	1	2	3	4	5	6	7

12. Of those sources provided above, which one was most important in selecting your current major? _____

13. On a scale from 1 to 7 (1 = Not at all important and 7 = Very important), please rate how important each academic program characteristic was for your selection of your current major.

	Not at all Important						Very Important
	1	2	3	4	5	6	7
A. Financial Aid	1	2	3	4	5	6	7
B. Size of program	1	2	3	4	5	6	7
C. Difficulty of coursework	1	2	3	4	5	6	7
D. Reputation of program	1	2	3	4	5	6	7
E. Program options (multiple tracks/majors)	1	2	3	4	5	6	7
F. Quality of faculty	1	2	3	4	5	6	7
G. Length of program (Time to graduation/employment)	1	2	3	4	5	6	7
H. Entry requirements	1	2	3	4	5	6	7
I. Flexibility of curriculum	1	2	3	4	5	6	7
J. Other (specify) _____	1	2	3	4	5	6	7

14. Of those sources provided above, which one was most important in selecting your current major? _____

APPENDIX (continued)

15. On a scale from 1 to 7 (1= Not appealing and 7= Extremely appealing), please rate how much each career appeals to you.

	Not Appealing			Extremely Appealing			
	1	2	3	4	5	6	7
Stock Broker	1	2	3	4	5	6	7
Medical Doctor	1	2	3	4	5	6	7
College Professor	1	2	3	4	5	6	7
Lawyer	1	2	3	4	5	6	7
Pharmacist	1	2	3	4	5	6	7
Nurse	1	2	3	4	5	6	7
School Teacher	1	2	3	4	5	6	7
Ski Instructor	1	2	3	4	5	6	7
Sanitation Worker	1	2	3	4	5	6	7
Computer Programmer	1	2	3	4	5	6	7
Business Owner	1	2	3	4	5	6	7
Biochemist	1	2	3	4	5	6	7
Entertainer (Actor, Musician, etc.)	1	2	3	4	5	6	7
Corporate Executive	1	2	3	4	5	6	7

16. On a scale from 1 to 7 (1 = Strongly disagree and 7 = Strongly agree), please rate your level of agreement with each statement.

	Strongly Disagree			Strongly Agree			
	1	2	3	4	5	6	7
There is plenty of information available about the profession of pharmacy	1	2	3	4	5	6	7
The information available about the profession of pharmacy is useful to those considering a pharmacy career	1	2	3	4	5	6	7
Before attending the University of Mississippi, it was easy to find information on the profession of pharmacy	1	2	3	4	5	6	7
Before attending the University of Mississippi, it was easy to find information on college of pharmacy programs	1	2	3	4	5	6	7
High school guidance counselors provide information on pharmacy programs	1	2	3	4	5	6	7
Community college guidance counselors provide information on pharmacy programs	1	2	3	4	5	6	7
It was easy to find information on the University of Mississippi College of Pharmacy	1	2	3	4	5	6	7
I felt the University of Mississippi School of Pharmacy wanted me to come to school here	1	2	3	4	5	6	7
Before attending the University of Mississippi, it was easy to communicate with the University of Mississippi School of Pharmacy	1	2	3	4	5	6	7
I would encourage others to apply to the University of Mississippi School of Pharmacy	1	2	3	4	5	6	7
I would encourage others to apply to any college of pharmacy	1	2	3	4	5	6	7

17. On a scale of 1 to 7 (1 = Not helpful and 7 = Very helpful), please rate how helpful each of these potential information sources from the University of Mississippi would have been in your recruitment.

	Not Helpful					Very Helpful	
	1	2	3	4	5	6	7
Brochures	1	2	3	4	5	6	7
World Wide Web Page	1	2	3	4	5	6	7
Computer CD-ROM	1	2	3	4	5	6	7
Other _____	1	2	3	4	5	6	7

Please answer the following questions about yourself. The information you provide will be kept confidential.

Age – _____

Home State – _____

Marital Status – Married Single Divorced Widowed

Ethnicity – Caucasian African-American Asian Other (specify)

Current educational status P1 P2 P3 P4

Parents' occupation (check one for each):

Occupations	Mother	Father
Management	<input type="radio"/>	<input type="radio"/>
Business and Financial Operations	<input type="radio"/>	<input type="radio"/>
Computer and Mathematical	<input type="radio"/>	<input type="radio"/>
Architecture and Engineering	<input type="radio"/>	<input type="radio"/>
Life, Physical, and Social Science	<input type="radio"/>	<input type="radio"/>
Farming, Fishing, and Forestry	<input type="radio"/>	<input type="radio"/>
Office and Administrative Support	<input type="radio"/>	<input type="radio"/>
Sales and Related	<input type="radio"/>	<input type="radio"/>
Personal Care and Service	<input type="radio"/>	<input type="radio"/>
Building and Grounds Cleaning and Maintenance	<input type="radio"/>	<input type="radio"/>
Food Preparation and Serving Related	<input type="radio"/>	<input type="radio"/>
Protective Service	<input type="radio"/>	<input type="radio"/>
Healthcare Support	<input type="radio"/>	<input type="radio"/>
Healthcare Practitioners and Technical	<input type="radio"/>	<input type="radio"/>
Arts, Design, Entertainment, Sports, and Media	<input type="radio"/>	<input type="radio"/>
Education, Training, and Library	<input type="radio"/>	<input type="radio"/>
Legal	<input type="radio"/>	<input type="radio"/>
Transportation and Material Moving	<input type="radio"/>	<input type="radio"/>
Military Specific	<input type="radio"/>	<input type="radio"/>
Production	<input type="radio"/>	<input type="radio"/>
Installation, Maintenance, and Repair	<input type="radio"/>	<input type="radio"/>
Construction and Extraction	<input type="radio"/>	<input type="radio"/>
Community and Social Services	<input type="radio"/>	<input type="radio"/>

APPENDIX (continued)
Non-Pharmacy Student Survey

The following is a survey to better understand the selection of major by students at Ole Miss. It should only take five to ten minutes to complete. All of your responses will remain confidential. Thank you for your thoughtful completion of this questionnaire.

1. Did you attend another institution of higher learning before attending Ole Miss? Yes No
If yes, which?

Community College _____

Another 4-year college _____

Other _____

2. Did you consider other schools in addition to Ole Miss? Yes No

If yes, which? _____

3. Were you employed before attending Ole Miss? Yes No

If yes, where?

Grocery/food

Restaurant

Other retail

Manufacturing/production

Pharmacy

Medical clinic/Hospital

Law firm

Other Professional _____

Farm/agriculture

Other _____

4. What extracurricular activities did you participate in while in high school?

Varsity Athletics

Drama

Debate/Mock Trial

Student Government

Honor Society

Band/Music

Did not participate

Other _____

5. What percentage of your total funding for education comes from each of the following sources?
(Please add the categories to 100%)

Source of funds	%
Scholarships	
Loans	
Other Financial Aid	
Work Study	
Job	
Family	
Other	
	100%

6. What is your current major? _____

7. Since arriving at Ole Miss, how many times have you changed your major?

8. What other majors did you consider? _____

9. On a scale from 1 to 7 (1 = No influence and 7 = Strong influence), please rate the influence that each source of information had on your selection of your current major.

	No Influence					Strong Influence	
	1	2	3	4	5	6	7
K. Parents	1	2	3	4	5	6	7
L. Other family members	1	2	3	4	5	6	7
M. High school teachers	1	2	3	4	5	6	7
N. College professors	1	2	3	4	5	6	7
O. Co-Workers/Job	1	2	3	4	5	6	7
P. Books and other printed materials	1	2	3	4	5	6	7
Q. Friends	1	2	3	4	5	6	7
R. Internet	1	2	3	4	5	6	7
S. Guidance counselor	1	2	3	4	5	6	7
T. Other (specify) _____	1	2	3	4	5	6	7

10. Of those sources provided above, which one was most influential in selecting your current major? _____

11. On a scale from 1 to 7 (1 = Not at all important and 7 = Very important), please rate how important each of these characteristics of your intended career were for the selection of your current major.

	Very Important					Not at all Important	
	1	2	3	4	5	6	7
K. Prestige	1	2	3	4	5	6	7
L. Earning potential	1	2	3	4	5	6	7
M. Flexibility of schedule	1	2	3	4	5	6	7
N. Availability of jobs	1	2	3	4	5	6	7
O. Flexibility of career (Ease of change within career)	1	2	3	4	5	6	7
P. Flexibility of location	1	2	3	4	5	6	7
Q. Family tradition	1	2	3	4	5	6	7
R. Fringe benefits	1	2	3	4	5	6	7
S. Type of work	1	2	3	4	5	6	7
T. Other (specify) _____	1	2	3	4	5	6	7

APPENDIX (continued)

12. Of those sources provided above, which one was most important in selecting your current major? _____

13. On a scale from 1 to 7 (1 = Not at all important and 7 = Very important), please rate how important each academic program characteristic was for your selection of your current major.

	Not at all Important					Very Important	
	1	2	3	4	5	6	7
K. Financial Aid	1	2	3	4	5	6	7
L. Size of program	1	2	3	4	5	6	7
M. Difficulty of coursework	1	2	3	4	5	6	7
N. Reputation of program	1	2	3	4	5	6	7
O. Program options (multiple tracks/majors)	1	2	3	4	5	6	7
P. Quality of faculty	1	2	3	4	5	6	7
Q. Length of program (Time to graduation/employment)	1	2	3	4	5	6	7
R. Entry requirements	1	2	3	4	5	6	7
S. Flexibility of curriculum	1	2	3	4	5	6	7
T. Other (specify) _____	1	2	3	4	5	6	7

14. Of those sources provided above, which one was most important in selecting your current major? _____

15. On a scale from 1 to 7 (1 = Not appealing and 7 = Extremely appealing), please rate how much each career appeals to you.

	Not Appealing					Extremely Appealing	
	1	2	3	4	5	6	7
Stock Broker	1	2	3	4	5	6	7
Medical Doctor	1	2	3	4	5	6	7
College Professor	1	2	3	4	5	6	7
Lawyer	1	2	3	4	5	6	7
Pharmacist	1	2	3	4	5	6	7
Nurse	1	2	3	4	5	6	7
School Teacher	1	2	3	4	5	6	7
Ski Instructor	1	2	3	4	5	6	7
Sanitation Worker	1	2	3	4	5	6	7
Computer Programmer	1	2	3	4	5	6	7
Business Owner	1	2	3	4	5	6	7
Biochemist	1	2	3	4	5	6	7
Entertainer (Actor, Musician, etc.)	1	2	3	4	5	6	7
Corporate Executive	1	2	3	4	5	6	7

16. Did you ever consider pharmacy as a career? Yes No
- If yes, why did you elect not to choose pharmacy as a major?
- Difficulty of coursework
 - Not interesting
 - Length of time to program completion

- If no, why not (check all that apply)?
- Unfamiliar with program
 - Other

Please answer the following questions about yourself. The information you provide will be kept confidential.

Age – _____ Home State – _____

Marital Status – Married Single Divorced Widowed

Ethnicity – Caucasian African-American Asian Other (specify) _____

Current educational status Freshman
 Sophomore
 Junior
 Senior
 Graduate Student

Parents' occupation (check one for each):

Occupations	Mother	Father
Management	<input type="radio"/>	<input type="radio"/>
Business and Financial Operations	<input type="radio"/>	<input type="radio"/>
Computer and Mathematical	<input type="radio"/>	<input type="radio"/>
Architecture and Engineering	<input type="radio"/>	<input type="radio"/>
Life, Physical, and Social Science	<input type="radio"/>	<input type="radio"/>
Farming, Fishing, and Forestry	<input type="radio"/>	<input type="radio"/>
Office and Administrative Support	<input type="radio"/>	<input type="radio"/>
Sales and Related	<input type="radio"/>	<input type="radio"/>
Personal Care and Service	<input type="radio"/>	<input type="radio"/>
Building and Grounds Cleaning and Maintenance	<input type="radio"/>	<input type="radio"/>
Food Preparation and Serving Related	<input type="radio"/>	<input type="radio"/>
Protective Service	<input type="radio"/>	<input type="radio"/>
Healthcare Support	<input type="radio"/>	<input type="radio"/>
Healthcare Practitioners and Technical	<input type="radio"/>	<input type="radio"/>

APPENDIX (continued)

Occupations	Mother	Father
Arts, Design, Entertainment, Sports, and Media	o	o
Education, Training, and Library	o	o
Legal	o	o
Transportation and Material Moving	o	o
Military Specific	o	o
Production	o	o
Installation, Maintenance, and Repair	o	o
Construction and Extraction	o	o
Community and Social Services	o	o