

**Students Under Pressure: An analysis of the extracurricular factors impacting
GSLIS students' academic programs at UT-Austin.**

Completed for Dr. Ronald Wyllys's LIS 397.1 "Introduction to Research in Library
and Information Science."

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ABSTRACT

GSLIS students were surveyed regarding non-school responsibilities and factors. A written questionnaire covering such topics as work, family, and distance of commute was distributed to all currently enrolled students. The number of returned surveys totaled 156, or 40.2%, of the GSLIS student body. The responses gathered were used to examine the effects that these types of variables have on the average course load taken by students in the program. The relationship between the number of hours employed and the number of hours enrolled is noted. In addition, the average number of hours enrolled for students with children was compared to students without children.

INTRODUCTION

Background

The students in the Graduate School of Library and Information Science (GSLIS) at the University of Texas experience a wide variety and degree of outside pressures, in addition to their classwork. Some students have entered the program immediately after receiving their undergraduate degrees; other students received their undergraduate degrees years or even decades ago and must readjust to the world of studies and academia and the many ways in which it has changed since the last time they were in school. Some students have young children and must arrange for childcare during classes. A number of students have full or part-time jobs. Many must commute long distances in order to attend classes.

Outline of the problem and its context

While it is widely understood within the graduate school that many of the students undergo a great deal of difficulty juggling their classwork with their outside responsibilities, actual figures about the types and degree of student pressures do not exist. Our group believes that gathering and analyzing such data will provide important information that will assist the GSLIS administration, faculty, and students in understanding the lifestyles and outside pressures on the student body. Such information can provide a personal, "human" look at the student population.

Literature Review

A search of the library and information science literature failed to uncover any past work designed to measure outside pressures on library and information science students. There were studies that examined the demographic background of library and information science students in particular graduate programs, but no articles looked at variables such as outside employment, family responsibilities, or distance of commute. A more exhaustive search of the literature that includes other disciplines, such as education, might have revealed articles on the topic of outside pressures on students.

PURPOSE

Hypothesis

The number of courses GSLIS students register for each semester is influenced by variables not related to school, such as work, family, and distance of commute.

Assumptions

In measuring several variables there are concerns as to the consistency of the data provided by the survey's participants. In the survey we ask questions concerning the amount time students work per week and the distance they travel to class; however, we have no way of knowing if their current situations have been consistent throughout their degree program. In regard to employment, it could be possible that a student may have begun the GSLIS program working a set number of hours, but as they advanced in the program realized that they needed to work more hours to meet financial needs. Likewise, a student may have reduced the hours they worked as they advanced in the program so that they could devote more time to their course problem. The potential for similar discrepancies can also be found in the distance traveled to attend class. A student could have possibly changed residences during the semester and increased or decreased the distance of their commute.

METHODS

What are the data that were used?

The data came from the results of a survey that was created and administered by the group. A pilot survey (see Appendix 1) was created as a result of an early brainstorming session. This pilot survey was given to students in a GSLIS administration class. Twenty-nine pilot surveys were completed and returned.

Analysis of the answers on the pilot survey during a subsequent group meeting resulted in various changes in the wording of the survey. For example, the pilot survey asked in which program within GSLIS the students were studying. Some respondents had to write in the category "undecided," since it had not been given as a choice. Also, the question "Are your jobs library related?" troubled some respondents; they wondered why they were not asked about information science-related jobs. These problems were corrected in the final survey, and a few additional changes were made.

The final survey (see Appendix 2) asks questions of GSLIS students concerning the degree type that is being pursued and in which city classes are attended. Respondents' age, gender, and year that first undergraduate degree was received are requested. The survey asks the semester of entry into GSLIS and the track chosen. Average number of hours enrolled per long semester and each summer session, and the total number of months required to complete the program are requested. Students are asked about their marital status, number and ages of their children, and their childcare needs while attending classes. A section of the survey asks whether classes have been missed due to work, inability to find childcare, or unreliable transportation. Regarding work, average number of hours employed per week is asked, along with whether the work is related to library and information science. A final question asks the distance traveled each way to attend classes.

How was the data collected?

The surveys were placed in the mailboxes of all GSLIS students, including doctoral students. Additionally, a message including the survey was sent to the GLISSA mailing list for out-of-town students and/or those preferring to respond by e-mail.

The printed surveys were returned to the mailboxes of the group members. The electronic responses were sent to the group member who posted the original message. In all, 156 responses were received; 19 of those were by e-mail. According to the GSLIS office, 388 students are enrolled in GSLIS; therefore, the response rate to the survey was 40.2%.

How was the data analyzed?

The data was entered in an Excel file, with one row per survey observation and one column for each survey variable. For some questions, such as age or number of years between undergraduate and graduate study, statistical procedures were used to determine the mean and median. For most questions, Excel functions such as "COUNTIF" were used to determine the number of responses in each category. Those category totals were then incorporated into Excel charts, which showed percentages of various responses for many of the survey questions.

For some questions the data analyzed depended on answers to other questions. For example, responses to the question about missing class due to childcare problems were counted only for respondents who had previously indicated the need to arrange for childcare. Likewise, the questions about missing class due to

work and having LIS-related employment counted only the responses from persons who had previously indicated that they were employed. The data from the question about the year the first undergraduate degree was received was combined with the data about the semester students entered GSLIS in order to calculate the number of years that had elapsed between the two courses of study. Doctoral candidates were not counted in this particular calculation since it was believed that might skew the answer.

In order to determine whether or not relationships exist between the number of hours taken each semester and the variables of having children 18 and under, working, and the distance traveled to campus, Pearson chi-square tests of homogeneity were performed. The tests were conducted using the SAS statistical analysis program.

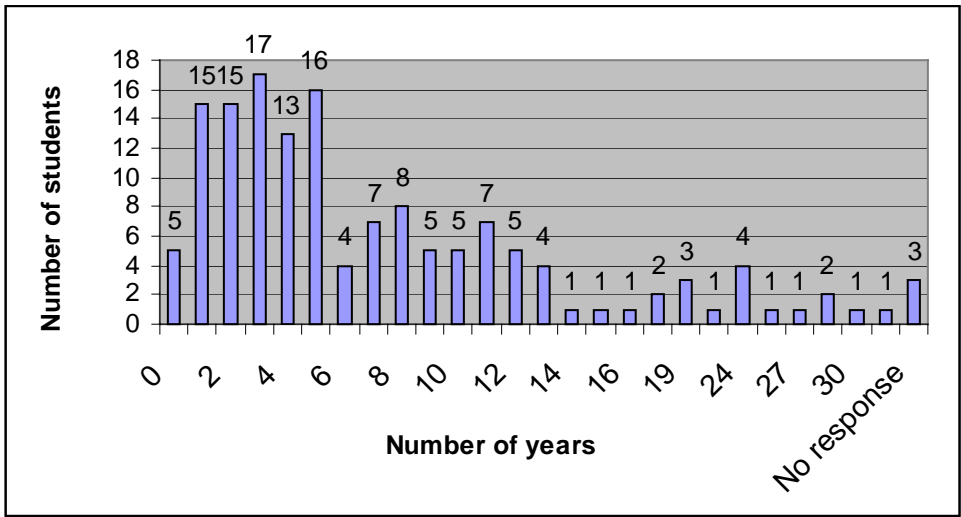
RESULTS

Of the 388 surveys we distributed, 40.2% were returned. From the surveys returned, we were able to obtain demographic information about GSLIS students, such as age, gender, track, hours, family information, hours employed per week, and distance traveled to attend class.

Description of Students

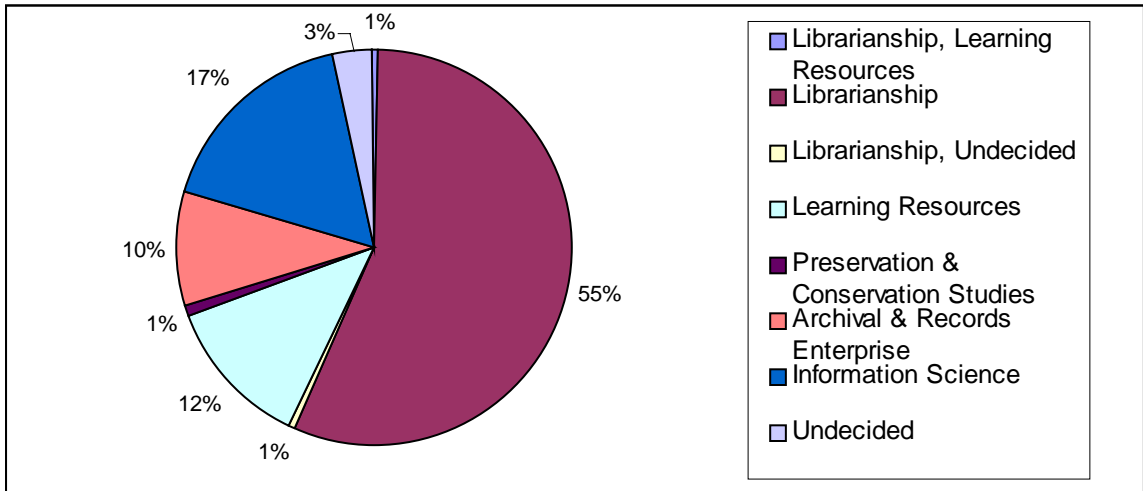
The UT Graduate School of Library and Information Science offers three degrees at three campuses in Austin, San Antonio, and El Paso. Of the survey respondents, the vast majority attend the Austin campus (86%), with much smaller numbers at the San Antonio (4%) and El Paso (2%) locations. Eight percent of the respondents attend both the Austin and San Antonio campuses. The response was similar for the degrees of study. Overwhelmingly, students are working towards a master's degree (89% of respondents), rather than a doctoral degree (6%), a learning resource endorsement (3%) or a combination masters/learning resource degree (2%). The average number of years between receiving an undergraduate degree and beginning the GSLIS Master's program is 7.4, with a median of 5 years. Figure 1 gives a detailed breakdown of the responses to this query.

Figure 1. Number of Years Between Receiving Undergraduate Degree and Beginning Master's Program



A much greater variation is shown in the students' pursuits of the six different programs in the Graduate School. As shown in Figure 2, just over half of the respondents are in the Librarianship program. The next largest programs include Information Science, Learning Resources and Archival & Records Enterprise (17%, 12%, and 10% of those surveyed). Much lower percentages of students are found in the Preservation & Conservation program, as well as those students who are undecided.

Figure 2. Student Distribution Among GSLIS Tracks of Study



Credit Hours Enrolled

The average number of credit-hours taken by GSLIS students during the regular school year is shown in Figure 2. Nearly two-thirds of students take full-time course loads (9 or more credit hours). The number of hours taken is significant when compared to the number of hours of employment, as will be discussed later in this section. Additionally, nearly three quarters of students take at least some summer school (Figure 4). Nearly a quarter of the respondents take four or more hours, although few are able to go full time in the summer (6 credit hours).

Figure 3. Average Hours Enrolled Each Regular Semester.

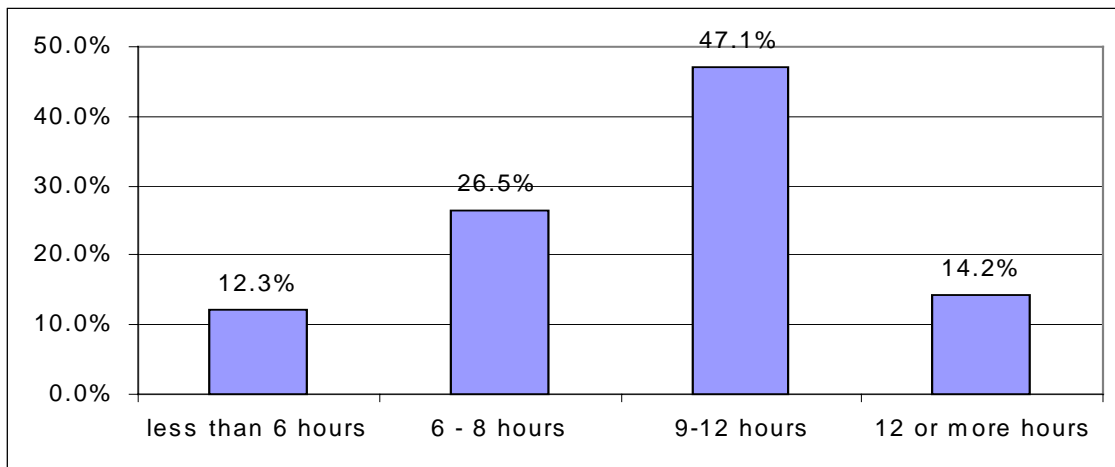
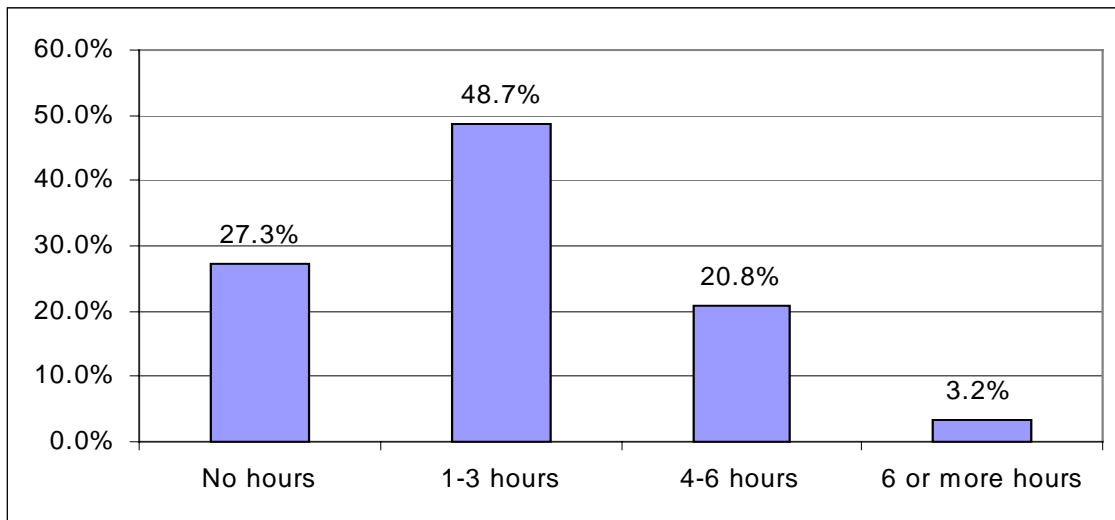


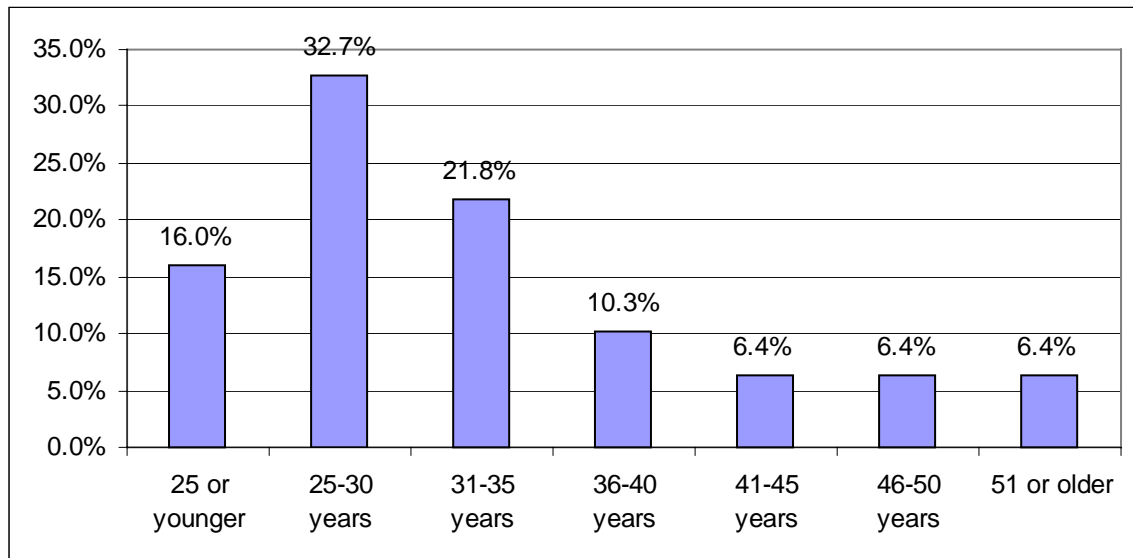
Figure 4. Average Hours Enrolled Each Summer Session.



Student Demographics

The majority of GSLIS students who responded are female (75%). The ages of the surveyed students show a mix of students in different phases of their lives (see Figure 5). Over half of those surveyed (54.4%) are between the ages of 26 and 35. Sixteen percent are 25 years or younger and the remainder of respondents are rather evenly spread out over the older four age groups. Of the students surveyed, ages range from 21 to over 60. Finally, an equal percentage of students responded as being single or married (44% each). Divorced or widowed students made up 11% of the sample and 1% did not respond to the question.

Figure 5. Age Categories of Students.

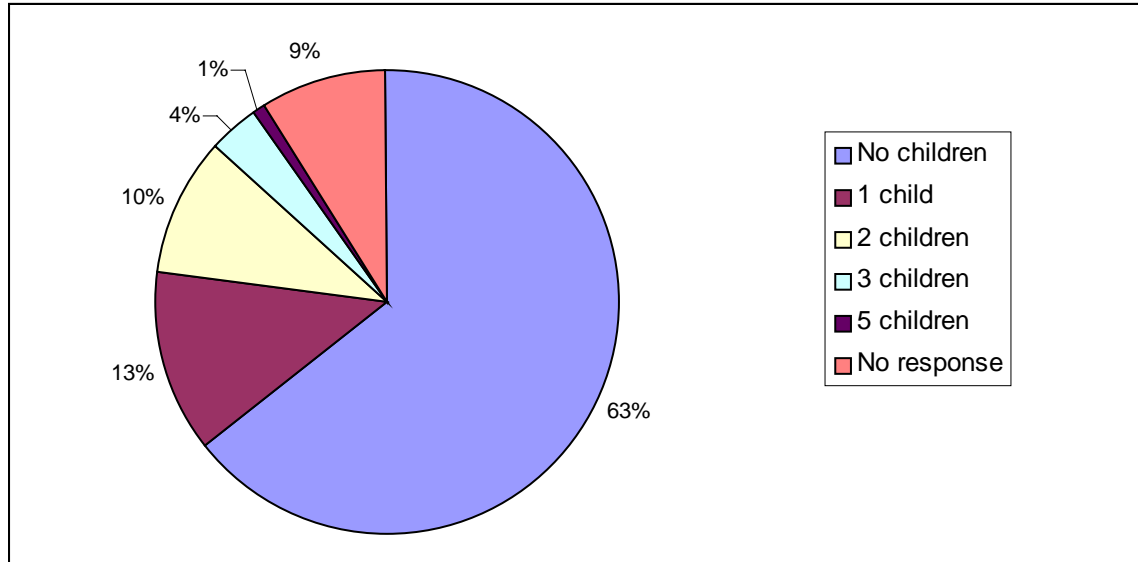


Students' Families

As seen from the percentages of students married or divorced (45%), and the age ranges of the students, it is reasonable to expect that families, especially children, would play a large role in GSLIS students' lives. Actually, only 28% of respondents indicated having at least one child, while 15% have two or more (Figure 6). The ages of the children range from newborns to young adults with the average age being 8.2 years (standard deviation = .922) and a median age of 7.5 years. Half of those students who indicated having

children need to arrange childcare while attending classes. This portion of students' lives can present significant challenges to students, as shown in the next section.

Figure 6. Number of Children Reported by Students.



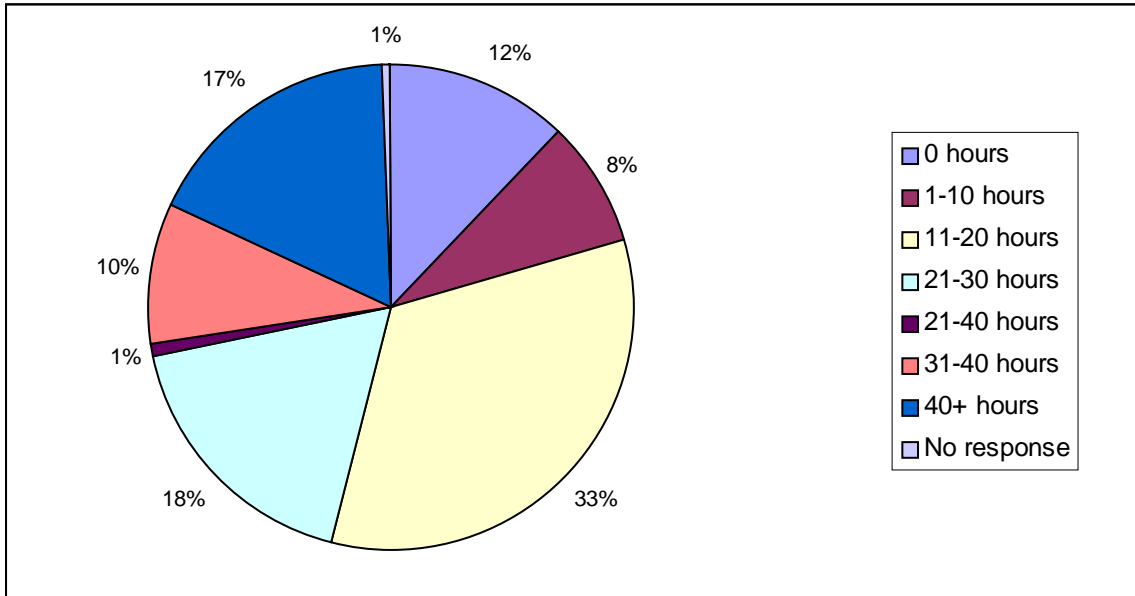
Students' Challenges

Reasons for Missing Class

Of those students indicating a need for childcare, 69% reported missing at least one class due to childcare conflicts. Comparatively, of the total surveyed number, only ten percent of students report missing at least one class due to transportation problems. Finally, sixty percent of GSLIS students say that they have missed at least one class due to conflicts with work. Data on how many times students have missed class due to these various reasons was not collected.

The survey revealed that 88% of GSLIS students surveyed work while attending school. There is a wide range in the number of work hours (Figure 7). Over a quarter of the respondents' work what could be considered full-time (31 hours per week or more). The majority of students work part-time during classes (1-30 hours per week), while only 12% are not employed at the time of the survey. Of the students saying that they are employed, 84% indicated that their jobs are related to library and information science.

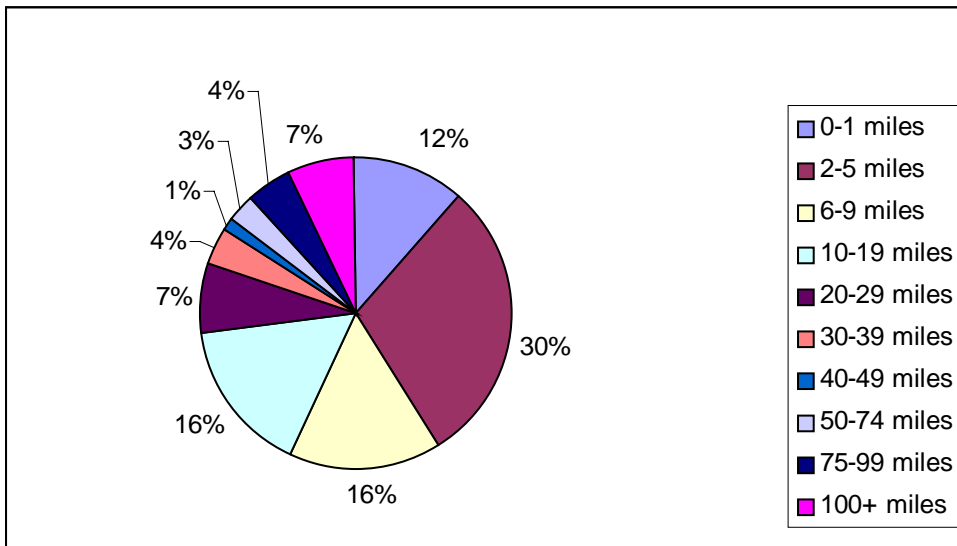
Figure 7. Numbers of Hours Worked by Students.



Distance Students Travel

Figure 8 illustrates the wide range of distances that students must travel to attend classes. Forty-two percent of the students responding to the survey indicated that they live within a five-mile radius of the campus where they take most of their classes. Eighty-one percent of the students live within 29 miles of school. Only 4% of the respondents live between 75 and 99 miles away from campus and only 7% must travel 100 miles or more, each way, to attend classes.

Figure 8. Distance Students Travel Each Way to Attend Class



Influences on Courseload

Several Pearson chi-square tests of homogeneity were performed to determine if there is a relationship between the average number of credit hours taken each long semester and during the summer sessions and factors such as having young children, working, and the distance a student must travel to attend classes. See appendix 3 for cross-tabulation tables and full statistical results of these six tests. The chi-square test comparing the number of credit hours taken during a regular semester by students with and without children ages 18 or under showed a statistically significant difference between the credit hours taken by the two groups (chi-square value=13.912). The test comparing these two groups and the number of credit hours taken during summer sessions revealed no statistically significant difference (chi-square value=2.907).

The comparison of the number of hours that students work each week, broken into categories, and the number of credit hours taken during a long semester resulted in a chi-square value of 67.439. The comparison using average credit hours taken during the summer had a chi-square value of only 2.907. The tests with the variable of distance students must travel had much the same results. During a regular semester, there is a significant difference between the number of hours taken and the categories of distance traveled to attend school (chi-square value=135.091). However, the test looking at distances and hours taken in the summer produced a chi-square value of only 25.930.

CONCLUSIONS

According to our survey results, it is clear that outside pressures affect the courseload of GSLIS students. There is a relationship between the number of credit hours taken and having young children (ages 18 and under) or not. As seen in Appendix 3, Table 1, students with young children are less likely to take heavy courseloads (12 hours or more). Those students working full-time (30 hours or more) tend to take lighter courseloads (less than 9 hours). Nearly all of the students who reported taking an average of 12 or more hours each regular semester worked less than 30 hours per week (see Appendix 3, Table 3). The distance that a student must travel each way to attend classes, not unexpectedly, affects the number of hours taken each regular semester. The vast majority of those students taking 9 or more credit hours live within 20 miles of the campus where they usually take classes. Students who report living 100 or more miles away from campus do not take heavy classloads (12 or more hours). However, it should be noted that only

10 of the respondents indicated that they must travel this distance. For details, see Appendix 3, Table 5. Surprisingly, as seen in Appendix 3, Tables 2, 4, and 6, we were unable to establish relationships between work, distance traveled, and ages of children with average hours enrolled during the summer semesters.

RECOMMENDATIONS

The results of this survey highlight challenges encountered by not only library and information science students, but by all graduate students. GSLIS already offers fellowships and student employment to relieve some of the pressures mentioned above; however, there are only a limited number of fellowships or student employment opportunities available. What can possibly be done for students who do not receive this type of assistance from GSLIS? One possibility is that the school could look into expanding its distance education programs, or it could increase the number of independent study credit hours it allows MLIS students to take. A further reaching program may have GSLIS working with other departments in the Sanchez building to provide childcare at a reasonable cost while the students are in class.

The scope of the survey described above can be expanded in the future to more accurately measure the impact of outside influences on GSLIS students. Future research in this area could include students' grade point averages, annual income, or amount of debt in student loans. Additionally, this survey could include graduate students in other disciplines, who likely face similar challenges in their education.

Further research in this area would be of value to students, educators, and administrators. As evident in the University of Texas's GSLIS, educators and administrators have a concern for the well being of their students. Further research would more accurately offer insight into the outside challenges encountered by graduate students, and then plans could be made to determine what could be done to minimize these difficulties.

Acknowledgements

The LIS 397.1 "Introduction to Research in Library and Information Science" group that conducted this survey offers a profound thank you to Kevin Kluge for lending his knowledge of SAS to help us analyze our data.

(Appendix 1) Pilot survey administered to Dr. Brooke Sheldon's LIS 387.1 "Introduction to Library Administration" on April 19, 1999.

- **Gender** (please circle one) Male Female
- **Your age** _____
- **Year you received your first undergraduate degree** _____
- **Semester entered GSLIS** _____
- **Program within GSLIS** (please circle one)
 Librarianship / Archival & Records Enterprise / Learning Resources /
 Preservation and Conservation Studies / Information Science
- **Average hours enrolled per long semester** _____
- **Average hours enrolled during each summer session** _____
- **Amount of time (in months) you will take to finish the program** _____
- **Marital status** (please circle one) single / married / divorced / widowed
- **Number of children** _____
- **Ages of children** _____
- **Average hours employed per week** (please circle one)
 0 / 1-10 / 11-20 / 21-30 / 31-40 / 40+
- **Are your jobs library related?** Yes No
- **Your zip code** _____
- **Most frequently used mode of transportation** (please circle one)
 Car / Walk / Bicycle / Bus / other

(Appendix 2) Survey administered to GSLIS students from April 22, 1999 to April 29, 1999.

- 1) **What degree are you pursuing?** Doctorate / Master's / LR Endorsement
 - 2) **Where do you attend classes?** Austin / El Paso / San Antonio
 - 3) **3A) Gender** (please circle one) Male Female **3B) Age** _____
 - 4) **Year first undergraduate degree was received** _____
 - 5) **Semester entered GSLIS** _____
 - 6) **Program within GSLIS** (please circle one)
Librarianship / Archival & Records Enterprise / Learning Resources /
Preservation and Conservation Studies / Information Science/ Undecided
 - 7) **Average hours enrolled per:**
 - 7A) **Long semester** _____
 - 7B) **Each summer session** _____
 - 8) **Amount of time (in months) you will take to finish the program** _____
 - 9) **Marital status** (please circle one) single / married / divorced / widowed
 - 10) **Number of children** _____
 - 11) **Ages of children** _____
 - 12) **Do you need to arrange for childcare while you are attending class?** _____
 - 13) **Have you ever missed a class due to:**
 - Inability to find childcare?** Yes No
 - Work?** Yes No
 - Unreliable transportation?** Yes No
 - 14) **Average hours employed per week** (please circle one)
0 / 1-10 / 11-20 / 21-30 / 31-40 / 40+
 - 15) **Is your employment related to library and information science?** Yes No
 - 16) **Distance (in miles) you travel each way to attend class**
0-1/ 2-5 / 6-9 / 10-19 / 20-29 / 30-39 / 40-49 / 50-74 / 75-99 / 100+
-

Appendix 3, Table 1. Chi-Square Test of Average Credit Hours Taken,
 Long Semester (CHCAT_L) and Students With Children Under 18
 (MINORS).

Chi-Square Analysis

9

Credit Hours per Long Semester
 Students With Children 18 or under

TABLE OF CHCAT_L BY MINORS

CHCAT_L	MINORS		Total
	N	Y	
0-2	0	1	1
	0.00	0.68	0.68
	0.00	100.00	
	0.00	3.57	
12+	19	2	21
	12.84	1.35	14.19
	90.48	9.52	
	15.83	7.14	
3-5	11	5	16
	7.43	3.38	10.81
	68.75	31.25	
	9.17	17.86	
6-8	26	12	38
	17.57	8.11	25.68
	68.42	31.58	
	21.67	42.86	
9-1	64	8	72
	43.24	5.41	48.65
	88.89	11.11	
	53.33	28.57	
Total	120	28	148
	81.08	18.92	100.00

STATISTICS FOR TABLE OF CHCAT_L BY MINORS

Statistic	DF	Value	Prob
Chi-Square	4	13.912	0.008
Likelihood Ratio Chi-Square	4	12.860	0.012
Mantel-Haenszel Chi-Square	1	1.329	0.249
Phi Coefficient		0.307	
Contingency Coefficient		0.293	
Cramer's V		0.307	

Sample Size = 148

WARNING: 40% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Appendix 3, Table 2. Chi-Square Test of Average Credit Hours Taken,
 Summer Semester (CHCAT_S) and Students With Children Under 18
 (MINORS).

Chi-Square Analysis

10

Credit Hours per Summer Semester
 Students With Children 18 or under

TABLE OF CHCAT_S BY MINORS

CHCAT_S	MINORS		
Frequency	N	Y	Total
0-2	36	7	43
Percent	24.32	4.73	29.05
Row Pct	83.72	16.28	
Col Pct	30.00	25.00	
3-5	54	17	71
Percent	36.49	11.49	47.97
Row Pct	76.06	23.94	
Col Pct	45.00	60.71	
6-8	26	4	30
Percent	17.57	2.70	20.27
Row Pct	86.67	13.33	
Col Pct	21.67	14.29	
9-1	4	0	4
Percent	2.70	0.00	2.70
Row Pct	100.00	0.00	
Col Pct	3.33	0.00	
Total	120	28	148
Percent	81.08	18.92	100.00

STATISTICS FOR TABLE OF CHCAT_S BY MINORS

Statistic	DF	Value	Prob
Chi-Square	3	2.907	0.406
Likelihood Ratio Chi-Square	3	3.645	0.302
Mantel-Haenszel Chi-Square	1	0.308	0.579
Phi Coefficient		0.140	
Contingency Coefficient		0.139	
Cramer's V		0.140	

Sample Size = 148

WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test

Appendix 3, Table 3. Chi-Square Test of Average Credit Hours Taken, Long Semester (CHCAT_L) and the Average Number of Hours Worked (WORK).

Chi-Square test

111

Ave Credit hours per Reg. Semester *
Ave Hours Worked per Week

TABLE OF CHCAT_L BY WORK

CHCAT_L	WORK						Total
Frequency	0	1-10	11-20	21-30	31-40	40+	
Percent							
Row Pct							
Col Pct							
0-2	0	0	0	0	0	1	1
	0.00	0.00	0.00	0.00	0.00	0.68	0.68
	0.00	0.00	0.00	0.00	0.00	100.00	
	0.00	0.00	0.00	0.00	0.00	3.85	
12+	6	1	9	5	1	0	22
	4.05	0.68	6.08	3.38	0.68	0.00	14.86
	27.27	4.55	40.91	22.73	4.55	0.00	
	33.33	9.09	17.65	18.52	6.67	0.00	
3-5	2	1	2	1	4	6	16
	1.35	0.68	1.35	0.68	2.70	4.05	10.81
	12.50	6.25	12.50	6.25	25.00	37.50	
	11.11	9.09	3.92	3.70	26.67	23.08	
6-8	3	1	4	7	6	17	38
	2.03	0.68	2.70	4.73	4.05	11.49	25.68
	7.89	2.63	10.53	18.42	15.79	44.74	
	16.67	9.09	7.84	25.93	40.00	65.38	
9-1	7	8	36	14	4	2	71
	4.73	5.41	24.32	9.46	2.70	1.35	47.97
	9.86	11.27	50.70	19.72	5.63	2.82	
	38.89	72.73	70.59	51.85	26.67	7.69	
Total	18	11	51	27	15	26	148
	12.16	7.43	34.46	18.24	10.14	17.57	100.00

Frequency Missing = 8

STATISTICS FOR TABLE OF CHCAT_L BY WORK

Statistic	DF	Value	Prob
Chi-Square	20	67.439	0.001
Likelihood Ratio Chi-Square	20	70.519	0.001
Mantel-Haenszel Chi-Square	1	0.718	0.397
Phi Coefficient		0.675	
Contingency Coefficient		0.559	
Cramer's V		0.338	

Effective Sample Size = 148

Frequency Missing = 8

WARNING: 63% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

**Appendix 3, Table 4. Chi-Square Test of Average Credit Hours Taken,
Summer Semester (CHCAT_S) and the Average Number of Hours Worked
(WORK).**

Chi-Square Test

114

Ave Credit Hour per Summer Semester *
Ave Hours Worked per Week

TABLE OF CHCAT_S BY WORK

CHCAT_S	WORK						Total
Frequency Percent Row Pct Col Pct	0	1-10	11-20	21-30	31-40	40+	
0-2	8 5.19 16.67 42.11	4 2.60 8.33 30.77	14 9.09 29.17 26.92	8 5.19 16.67 28.57	4 2.60 8.33 26.67	10 6.49 20.83 37.04	48 31.17
3-5	7 4.55 9.72 36.84	7 4.55 9.72 53.85	30 19.48 41.67 57.69	8 5.19 11.11 28.57	9 5.84 12.50 60.00	11 7.14 15.28 40.74	72 46.75
6-8	4 2.60 13.33 21.05	2 1.30 6.67 15.38	8 5.19 26.67 15.38	9 5.84 30.00 32.14	2 1.30 6.67 13.33	5 3.25 16.67 18.52	30 19.48
9-1	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 1.95 75.00 10.71	0 0.00 0.00 0.00	1 0.65 25.00 3.70	4 2.60
Total	19 12.34	13 8.44	52 33.77	28 18.18	15 9.74	27 17.53	154 100.00

Frequency Missing = 2

STATISTICS FOR TABLE OF CHCAT_S BY WORK

Statistic	DF	Value	Prob
Chi-Square	15	19.102	0.209
Likelihood Ratio Chi-Square	15	18.360	0.244
Mantel-Haenszel Chi-Square	1	0.418	0.518
Phi Coefficient		0.352	
Contingency Coefficient		0.332	
Cramer's V		0.203	

Effective Sample Size = 154

Frequency Missing = 2

WARNING: 46% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

**Appendix 3, Table 5. Chi-Square Test of Average Credit Hours Taken,
Long Semester (CHCAT_L) and the Distance Traveled (DSTNCE).**

Chi-Square Test

112

Ave Credit Hour per Reg. Semester *
Ave Distance Travelled

TABLE OF CHCAT_L BY DSTNCE

CHCAT_L	DSTNCE					Total
Frequency	0-1	10-19	100+	2-5	20-29	
Percent						
Row Pct						
Col Pct						
0-2	0	0	0	0	0	1
	0.00	0.00	0.00	0.00	0.00	0.68
	0.00	0.00	0.00	0.00	0.00	
	0.00	0.00	0.00	0.00	0.00	
12+	4	1	0	8	1	22
	2.74	0.68	0.00	5.48	0.68	15.07
	18.18	4.55	0.00	36.36	4.55	
	22.22	4.17	0.00	19.05	10.00	
3-5	1	6	1	0	2	15
	0.68	4.11	0.68	0.00	1.37	10.27
	6.67	40.00	6.67	0.00	13.33	
	5.56	25.00	10.00	0.00	20.00	
6-8	0	7	7	5	5	38
	0.00	4.79	4.79	3.42	3.42	26.03
	0.00	18.42	18.42	13.16	13.16	
	0.00	29.17	70.00	11.90	50.00	
9-1	13	10	2	29	2	70
	8.90	6.85	1.37	19.86	1.37	47.95
	18.57	14.29	2.86	41.43	2.86	
	72.22	41.67	20.00	69.05	20.00	
Total	18	24	10	42	10	146
	12.33	16.44	6.85	28.77	6.85	100.00

(Continued)

TABLE OF CHCAT_L BY DSTNCE

CHCAT_L	DSTNCE					Total
Frequency	30-39	40-49	50-74	6-9	75-99	
Percent						
Row Pct						
Col Pct						
0-2	0	1	0	0	0	1
	0.00	0.68	0.00	0.00	0.00	0.68
	0.00	100.00	0.00	0.00	0.00	
	0.00	50.00	0.00	0.00	0.00	
12+	3	0	1	4	0	22
	2.05	0.00	0.68	2.74	0.00	15.07
	13.64	0.00	4.55	18.18	0.00	
	50.00	0.00	20.00	17.39	0.00	
3-5	1	0	0	2	2	15
	0.68	0.00	0.00	1.37	1.37	10.27
	6.67	0.00	0.00	13.33	13.33	
	16.67	0.00	0.00	8.70	33.33	
6-8	2	1	3	5	3	38
	1.37	0.68	2.05	3.42	2.05	26.03
	5.26	2.63	7.89	13.16	7.89	
	33.33	50.00	60.00	21.74	50.00	
9-1	0	0	1	12	1	70
	0.00	0.00	0.68	8.22	0.68	47.95
	0.00	0.00	1.43	17.14	1.43	
	0.00	0.00	20.00	52.17	16.67	
Total	6	2	5	23	6	146
	4.11	1.37	3.42	15.75	4.11	100.00

Frequency Missing = 10

Chi-Square Test

Ave Credit Hour per Reg. Semester *
Ave Distance Travelled

STATISTICS FOR TABLE OF CHCAT_L BY DSTNCE

Statistic	DF	Value	Prob
Chi-Square	36	135.091	0.001
Likelihood Ratio Chi-Square	36	81.764	0.001
Mantel-Haenszel Chi-Square	1	1.533	0.216
Phi Coefficient		0.962	
Contingency Coefficient		0.693	
Cramer's V		0.481	

Effective Sample Size = 146

Frequency Missing = 10

WARNING: 84% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Appendix 3, Table 6. Chi-Square Test of Average Credit Hours Taken, Summer Semester (CHCAT_S) and the Distance Traveled (DSTNCE).

Chi-Square Test

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Ave Credit Hour per Summer Semester *
Ave Distance Travelled

TABLE OF CHCAT_S BY DSTNCE

CHCAT_S	DSTNCE					Total
Frequency	0-1	10-19	100+	2-5	20-29	
Percent						
Row Pct						
Col Pct						
0-2	4	6	6	16	2	48
	2.61	3.92	3.92	10.46	1.31	31.37
	8.33	12.50	12.50	33.33	4.17	
	22.22	25.00	54.55	34.78	18.18	
3-5	8	15	4	17	8	71
	5.23	9.80	2.61	11.11	5.23	46.41
	11.27	21.13	5.63	23.94	11.27	
	44.44	62.50	36.36	36.96	72.73	
6-8	6	2	0	12	1	30
	3.92	1.31	0.00	7.84	0.65	19.61
	20.00	6.67	0.00	40.00	3.33	
	33.33	8.33	0.00	26.09	9.09	
9-1	0	1	1	1	0	4
	0.00	0.65	0.65	0.65	0.00	2.61
	0.00	25.00	25.00	25.00	0.00	
	0.00	4.17	9.09	2.17	0.00	
Total	18	24	11	46	11	153
	11.76	15.69	7.19	30.07	7.19	100.00

(Continued)

TABLE OF CHCAT_S BY DSTNCE

CHCAT_S	DSTNCE					Total
Frequency	30-39	40-49	50-74	6-9	75-99	
Percent						
Row Pct						
Col Pct						
0-2	1	0	2	10	1	48
	0.65	0.00	1.31	6.54	0.65	31.37
	2.08	0.00	4.17	20.83	2.08	
	16.67	0.00	40.00	41.67	16.67	
3-5	3	1	2	8	5	71
	1.96	0.65	1.31	5.23	3.27	46.41
	4.23	1.41	2.82	11.27	7.04	
	50.00	50.00	40.00	33.33	83.33	
6-8	2	1	1	5	0	30
	1.31	0.65	0.65	3.27	0.00	19.61
	6.67	3.33	3.33	16.67	0.00	
	33.33	50.00	20.00	20.83	0.00	
9-1	0	0	0	1	0	4
	0.00	0.00	0.00	0.65	0.00	2.61
	0.00	0.00	0.00	25.00	0.00	
	0.00	0.00	0.00	4.17	0.00	
Total	6	2	5	24	6	153
	3.92	1.31	3.27	15.69	3.92	100.00

Frequency Missing = 3

STATISTICS FOR TABLE OF CHCAT_S BY DSTNCE

Statistic	DF	Value	Prob
Chi-Square	27	25.930	0.522
Likelihood Ratio Chi-Square	27	29.582	0.333
Mantel-Haenszel Chi-Square	1	0.236	0.627
Phi Coefficient		0.412	
Contingency Coefficient		0.381	
Cramer's V		0.238	

Effective Sample Size = 153

Frequency Missing = 3

WARNING: 73% of the cells have expected counts less than 5. Chi-Square may not be a valid test.