

Student Use of the GSLIS Multimedia Lab

**LIS 397.1 Introduction to Research in Library
& Information Science**

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1 ABSTRACT

Despite offering a number of unique resources and services, the Multimedia Lab at the Graduate School of Library and Information Science (GSLIS) has been underused by GSLIS students. A survey of GSLIS students at the University of Texas at Austin (UT) was conducted to assess perceptions concerning the lab's resources and purpose.

Users were asked to identify resources that would improve the lab's functionality and possible reasons for its lack of use. Students responded by indicating their agreement with written statements about the Multimedia Lab and its use. Students were also encouraged to offer written suggestions. The majority of respondents indicated that they use the lab infrequently and they are generally unaware of the services available at the Multimedia Lab. Few respondents offered suggestions for improving the utility of the Multimedia Lab. A significant percentage did indicate additional hardware and software would increase their usage of the facilities.

2 INTRODUCTION

2.1 Background

The Multimedia Lab is a part of GSLIS's Information Technology (IT) Services organization. The Multimedia Lab, along with the IT Lab, was established to "to plan, implement, support, and promote information technology systems use for the GSLIS students, staff, and faculty"¹, as outlined by the IT Services Mission Statement. An essential part of the presentation of information is the inclusion of multimedia services and materials. With the explosion of the World Wide Web and interactive computing environments, presentation of multimedia objects in a digital format has taken on increased importance. To meet the multimedia needs of GSLIS students, the lab offers a

variety of tools and resources including: four Macintosh computers (two Power Mac7300/180, one PowerMac G3, and one PowerMac 8500/120), a variety of graphics and web development software, audio and video editing equipment, a laminator, analog and digital still and video cameras, and a light table. The lab is staffed thirty-two hours per week by one GSLIS teaching assistant (TA) and one student in a work-study position, both of whom specialize in the use and instruction of multimedia tools.

2.2 Outline of the problem and its context

Although students in certain GSLIS classes and technology oriented faculty occasionally use the lab, student use of the Multimedia Lab is far below present capabilities. Since student technology fees fund the maintenance and staffing of the lab, the IT Services staff has a vested interest in increasing the use of Multimedia Lab services. Additional funding and expansion of Multimedia Lab services cannot be justified until the lab is proven to be a valuable resource, enhancing the educational opportunities of GSLIS. Aside from speculation on the part of the lab staff, little is known about why students do not use the Multimedia Lab. This is a direct result of the fact that little is known about the multimedia need of GSLIS students. Lack of student use of the Multimedia Lab could be due to several factors: lack of a sufficient number of computers, inconvenient location, poorly advertised services or insufficient services. To best serve the needs of the GSLIS student body, members of the Multimedia Lab staff initiated this study.

3 PURPOSE

3.1 Hypothesis

The purpose of this survey was to gather information about the needs and habits of GSLIS students relating to their use of multimedia applications and tools. No formal hypothesis was articulated. The survey can be best described as exploratory. The research team is interested in determining student attitudes towards the Multimedia Lab and its services; the team did not anticipate relationships prior to data collection.

3.2 Definitions

Multimedia: In the context of personal computing, multimedia relates to the use of computers to present text, graphics, video, animation, and sound in an integrated way. However, the Multimedia Lab supports many services and tools that involve sound, video, graphics that are not directly tied to computers (analog video editing, for example). Analog tools and services also fall under the broad definition of multimedia in this context.

Multimedia Lab: A lab with multimedia equipment supported by GSLIS student technology fees; it serves GSLIS students, classes, and faculty.

3.3 Assumptions

For the purpose of this survey, the research team assumed a general knowledge of multimedia is essential to the effective representation and presentation of information, whether in analog or digital forms. Furthermore, the research team has identified the

Multimedia Lab as a resource dedicated to the instruction and application of multimedia tools. The survey is intended to help develop strategies for increasing lab usage.

The research team also assumed GSLIS students have a general understanding about the existence and location of the Multimedia Lab. Incoming students are required to have their pictures taken in the Multimedia Lab as part of orientation.

4 METHODS

4.1 Data Collection

The research team identified the following questions as essential in determining how GSLIS students use the Multimedia Lab and what measures can be taken to improve its utility:

1. How often do GSLIS students use the Multimedia Lab;
2. How are students incorporating multimedia in course projects at GSLIS;
3. Are students aware of the variety of lab equipment and services available;
4. What reasons do student have for not using the Multimedia Lab;
5. What materials and services would students like to see added to the Multimedia Lab.

A survey was issued to all GSLIS students at UT Austin (see section 4.2). It consisted of ten statements and questions. The first two questions asked students to select items from a list that best applied to their situation. The rest of the survey asked students to rate categorically whether or not they agreed with a number of statements about the Multimedia Lab and its services. The rating system scale was repeated before each relevant section.

Students were asked to rate their opinions on a scale from one to five.

Determining relative strength and weakness of each student's response to the various

statements was considered necessary by the research team in order to interpret the research data. The scale is as follows:

- 1 = Strongly Agree**
- 2 = Agree**
- 3 = Uncertain**
- 4 = Disagree**
- 5 = Strongly Disagree**

Students were instructed to choose “3” if they felt they could not answer due to a lack of knowledge of the Multimedia Lab. Unanswered questions were also scored as “3's” (see section 4.3).

4.2 Data Collection

A pilot survey was administered to students in LIS 397.1, Introduction to Research in Library and Information Science. The sample size of the pilot survey was roughly thirty students, twelve responses were received. Flaws in the initial implementation of the survey were readily apparent: three surveys were filled out correctly, two were completed but incorrectly marked, and seven were partially complete. Several students commented that the survey was confusing and over lengthy. Changes made at this juncture involved clarifying survey instructions and definitions and a modification of the rating scale.

Surveys (Appendix A) were distributed to all GSLIS students at UT Austin. In total, 397 surveys were distributed. Surveys were placed in each student's "mailbox". Mailboxes are located on the fourth floor of the Sanchez building outside of the IT Lab. In addition, an email message was distributed on the GSLIS student mailing list

informing students of the survey and its purpose. Students were encouraged to complete the surveys and place completed surveys in a box located outside of the IT Lab entrance.

Students were given one week to complete the survey and place it in the collection box. A total of 97 surveys were collected.

4.3 Analysis of Data

See Appendix B for the results of the survey. The number in parenthesis for Sections Two and Three indicates the number of respondents who omitted the question. Those who did not answer a question were grouped with those who responded uncertain. The research team chose to present its results in this manner because research team believed that the omission of a question indicated that the respondent did not have a strong opinion regarding that question. This includes Section Three of the survey, which has instructions indicating that the omission of an item would be recorded as a "5" (Strongly Disagree). Eleven people omitted the section completely. The mean number of non-respondents for each question in Section Three is 22. The last two questions, 3.4 and 3.5 had 22 and 20 non-respondents respectively.

Table 1

	Mean Number of Omissions
Question 2.1	3
Question 2.2	2
Question 2.3	2
Question 2.4	20
Question 2.5	16
Question 2.6	18
	Mean number of omissions
Question 3.1	24
Question 3.2	22
Question 3.3	23
Question 3.4	22
Question 3.5	20

The omissions indicated not only that the survey was too long, but that the questions were posed in a manner too complicated to be easily answered. Evidence of the problem can be found at the beginning of Section Two. For the first three questions, 2.1 through 2.3, (those which have no sub-sections), the number of respondents was very low: three, two and two respectively. The first subsection in question 2.4 ("In my opinion the Multimedia Lab is a teaching lab") had 20 omissions. In an effort to create questions which were not restrictive and which explored a wide array of possible responses, we built a survey that was too difficult for some people to answer. Since the

majority of respondents did not omit questions, it can be assumed that when the respondents choose to omit a question they were free from the influence of volunteerism.

5 RESULTS AND CONCLUSIONS

Analysis of the raw data confirms many of the suspicions the research team held about student use of the Multimedia Lab. Of particular interest is the fact that an overwhelming majority of the respondents, 81.72%, said they had never used the Multimedia Lab or only use the lab once a semester. However, nearly 70% of the respondents said they have had to create web pages for at least one class assignment, 35% have had to create web graphics. In addition, 53% of the respondents have had to create a Microsoft PowerPoint presentation involving graphics or sound. Clearly, GSLIS students are involved in projects that, as part of their class assignments, directly involve multimedia objects. However, no areas of multimedia work listed on the survey other than the ones mentioned above are used by at least 10% of the respondents. The question remains why few students actually seek the expertise of the Multimedia Lab staff despite the fact that they are involved in the production of multimedia objects.

A considerable majority of the respondents, 65.6%, agree that the Multimedia Lab offers services that the IT Lab does not. Twenty percent of the respondents strongly agreed with this statement. However, the survey results suggest that students are largely unaware of the services offered by the Multimedia Lab. One student commented, "I don't think it relates very broadly to the study of LIS." Nearly 39% of the respondents agreed, 19% strongly, that they have no reason to use the facilities. Certainly the types of services offered by the Multimedia Lab lie beyond the immediate interests of many

GSLIS students, but the research team questions whether the above statistic is, in reality, a reflection of student ignorance of Multimedia Lab functions.

When respondents were asked to rate their opinion of Multimedia Lab functions, students overwhelmingly indicated that they were uncertain exactly why the lab is open. Furthermore, nearly 42% of the respondents' feel that the services offered by the Multimedia Lab are not well advertised (as opposed to 17% who felt the services were well advertised and 34% who had no opinion). This analysis is born out by some of the comments written on the survey margins. Some telling responses are as follows:

"It needs to be advertised more. I didn't even know it was here 'til I had been here at least one year!"

"It's not publicized at all: What do they have there? Why don't they ever offer any classes, like the IT LAB does?"

Related to the problem of poorly advertised services is a general unfamiliarity with multimedia tools and applications as a whole. Nearly 37% of the respondents indicated they were not familiar with Multimedia Lab equipment and software (as opposed to 11% who indicated familiarity with equipment and software). The remainders of respondents were not certain of whether they were familiar with equipment and software. Some individual respondents indicated that "I don't know what it (the Multimedia Lab) offers" and " I'm really not familiar w/ these services offered in the Lab. The location doesn't help either, since I always forget it's there."

6 RECOMMENDATIONS

The integration of information technologies in the study of LIS has been well documented in professional literature. As network-based information services and the World Wide Web continue to evolve, multimedia objects (such as audio, video and

interactive graphics) will continue to proliferate. LIS students need to be cognizant of the fact that the effective retrieval, presentation and preservation of multimedia objects clearly is the responsibility of information professionals.

Technologies such as streaming media have already made wide distribution of multimedia objects over a network a reality. If the development of multimedia mirrors the growth of the Web itself, users will soon be faced with an overwhelming amount of audio, video, and animated graphic resources. Already, film, music and recordings of television broadcasts rest in special Furthermore, the non-text basis of these artifacts complicates issues of indexing and retrieval. Who is better qualified to meet the challenges of dealing with multimedia objects than LIS students? The students and faculty of a top-rated LIS institution such as UT's should jump at the opportunity to direct influence the development of multimedia resources. With this in mind, GSLIS needs to think critically about how services such as those provided by the Multimedia Lab can be developed for the maximum benefit of GSLIS students.

In order to ensure maximum utility of the Multimedia Lab, the research team recommends a number of changes. The working environment in the lab needs to be improved. Currently, the Multimedia Lab has become essentially a storage area for surplus department hardware. As one respondent commented, " (the lab needs) less clutter & junk. Right now, it seems more like half a storage closet/special projects area & half a lab." Nearly 24% of the respondents indicated that an improved working environment would enhance their academic experience in the lab (only respondent disagreed with this assertion).

As was indicated above, services and functions of the Multimedia Lab are poorly advertised. The research team believes student use of the lab would increase if students were better informed about the services offered. Possible means for advertising lab resources could include the distribution of pamphlets describing what the lab functions, an increased presence on the department web site, instruction of IT Services short courses in the Multimedia Lab itself, and the distribution of messages promoting lab services on the department mailing list. The research team also recommends that the GSLIS faculty encourage student during class time, when relevant to course work, to use the Multimedia Lab.

Another area for improvement deals with the acquisition of computers and periphery devices for the Multimedia Lab. Nearly 35% of the respondents indicated their experience in the lab would be enhanced with the addition of a color printer to the lab's hardware inventory. The addition of "basic" items such as computers, printers and scanners would dramatically increase the utility of the lab. Recall that the single greatest multimedia need of GSLIS students involves the production of web-related material. Although the presence of audio and video editing tools is essential to fulfilling the lab's mission, the acquisition of additional computers will have the greatest effect on increasing the lab's utility.

7 SUMMARY

This report presents the analysis of a study administered by students in LIS 397.1, Introduction to Research in Library & Information Science concerning student use and attitudes toward the GSLIS Multimedia Lab. GSLIS students infrequently use the lab and are generally unfamiliar with the variety of services and tools offered in the lab.

However, the majority of GSLIS students are currently involved in the production of multimedia materials. The research team believes that better advertising of lab services will alleviate confusion about the function of the lab. As student familiarity increases, the research team expects that GSLIS students will come to view the Multimedia Lab as a valuable resource for instruction in media production and presentation. To facilitate increased use of the lab, the research team recommends a reorganization of the lab's physical space.

APPENDICES

Appendix A

Survey for the Multimedia Lab

Explanatory Comments

This survey designed to help the staff of the Multimedia Lab better understand the multimedia needs of GSLIS students. Responses help improve the quality of service the lab offers to GSLIS students. This survey is part of the coursework for Dr. Wyllys's Research class.

All responses will remain confidential. Your help with this survey will be greatly appreciated.

Please return this survey to the box labeled Multimedia Lab Survey in the IT Lab by Friday, April 30, 1999. Thanks!

Section One

For this section only, please check the items that best apply.

I use the Multimedia Lab (choose one)

- more than 12 times a semester
- once a week
- once a month
- once a semester
- never

Even if you answered never, please fill out the remainder of the survey. Your answers are important even if you feel that you lack knowledge of the Multimedia Lab.

In my time at GSLIS, I have been required to work on class projects involving (choose many as apply)

- web page production
- web graphics
- video recording and editing
- digital video
- audio recording and editing
- digital audio
- Powerpoint presentations involving graphics and/or sound
- Multimedia tools such as (please fill in the blank):

Note: The term "multimedia" refers to software and tools that involve sound, video, graphics, and/or film.

Section Two

Please answer each question with a number from the scale that reflects your opinion about the following statements. You may choose Uncertain/No opinion if you feel you cannot answer due to your lack of knowledge of the multimedia lab. Each question that is not answered will be scored a 3 -- Uncertain/No Opinion.

SCALE

1 = Strongly Agree

2 = Agree

3 = Uncertain

4 = Disagree

5 = Strongly Disagree

The Multimedia Lab offers services and tools that the IT Lab doesn't. _____

I know the Multimedia Lab hours , or where to find out what they are. _____

The services supplied by the Multimedia Lab are well advertised. _____

In my opinion, the Multimedia Lab is

a teaching lab _____

a production lab _____

a meeting room _____

a lab for professors _____

a lab for students _____

other (please fill in the blank with an additional option and scale that option) _____

When I have a question about multimedia (graphics, audio, video, etc.) , I am most likely to seek advice from (please scale each option)

an IT Lab teaching assistant _____

my professor _____

a Multimedia Lab teaching assistant _____

reference book or online guide _____

classmate or colleague _____

The following factors significantly deter me from using the Multimedia Lab

inconvenient location _____

size or layout of the facility _____

lack of familiarity with the equipment/software _____

no reason to use the facilities _____

no opportunity to use the facilities _____

it does not have what I need _____

it does not have enough computers _____

I personally own sufficient multimedia hardware/software _____

Other _____

None of the above _____

Section Three

For this section, choose only those options that apply. Please use the scale listed below. Lack of an answer will be scored as a "5" -- Strongly Disagree.

SCALE

1 = Strongly Agree

2 = Agree

3 = Uncertain

4 = Disagree

5 = Strongly Disagree

I feel that the services of the Multimedia Lab could enhance my academic experience if it had:

___ Computers

___ More computers

___ Faster computers

___ Microsoft Windows computers

___ Linux/Unix computers

___ Graphics

___ More Web graphics software

___ More 3-D graphics software

___ More animation software

___ A printer

___ A color printer

___ More scanners

___ Audio

___ More audio recording equipment

___ More digital audio equipment

___ More digital audio software

___ Video

___ More video recording equipment

___ More analog video editing equipment

___ More digital video editing equipment

___ More digital video editing software

___ Environment

___ Improved working environment

Please name any specific multimedia tools which you would like to use.

Other general comments you would like to make about the Multimedia Lab: _____

Appendix B

Survey Results

Section One		
1.1 I use the multimedia lab	Numbers	Percentage
more than 12 times a semester	7	7.53%
once a week	3	3.23%
once a month	9	9.68%
once a semester	28	30.11%
never	48	51.61%
1.2 In my time at GSLIS, I have been required to work on class projects involving		
web page production	64	68.82%
web graphics	33	35.48%
video recording and editing	9	9.68%
digital video	5	5.38%
audio recording and editing	8	8.60%
digital audio	4	4.30%
Powerpoint presentations involving graphics and/or sound	50	53.76%
None of the above	8	8.60%

Sections two and three based on the following scale:

- 1 = Strongly Agree
- 2 = Agree
- 3 = Uncertain
- 4 = Disagree
- 5 = Strongly Disagree

NOTE--#'s in parentheses in column 3 are the # of Non-responses

Section Two	1	2	3	4	5
2.1 The Multimedia Lab offers services that the IT Lab doesn't	19 20.4%	42 45.2%	30 (3) 32.7%	1 1.1%	0 0%
2.2 I know the Multimedia Lab hours, or where to find out what they are	27 29.0%	34 36.6%	18 (2) 19.4%	9 9.68%	3 3.23%
2.3 The services offered by the Multimedia Lab are well advertised	4 4.3%	13 14.0%	32 (2) 34.4%	27 29.0%	12 12.9%
2.4 In my opinion, the Multimedia Lab is:					
a teaching lab	9 9.7%	14 15.1%	32 (20) 34.4%	1 1.1%	0 0.0%
a production lab	22 23.7%	26 28.0%	43 (14) 46.2%	1 1.1%	1 1.1%
a meeting room	2 2.2%	3 3.2%	62 (21) 66.7%	14 15.1%	4 4.3%

	1	2	3	4	5
a lab for professors	7	10	69 (21)	9	2
	7.5%	10.8%	74.2%	9.7%	2.2%
a lab for students	21	29	39 (22)	0	1
	22.6%	31.2%	41.9%	0.0%	1.1%
2.5 When I have a question about multimedia, I am mostly likely to seek advice from:					
an IT Lab Teaching Assistant	23	20	35 (14)	9	4
	24.7%	21.5%	37.6%	9.7%	4.3%
my professor	3	17	42 (19)	16	13
	3.2%	18.3%	45.2%	8.6%	7.5%
a Multimedia Lab assistant	15	20	43 (19)	8	7
	16.1%	21.5%	46.2%	8.6%	7.5%
reference book or online guide	19	31	31 (14)	11	1
	20.4%	33.3%	33.3%	11.8%	1.1%
classmate or colleague	24	29	32 (14)	3	2
	25.8%	31.2%	34.4%	3.2%	2.2%
2.6 The following factors significantly deter me from using the multimedia lab					
inconvenient location	7	12	45 (17)	18	13
	7.5%	12.9%	48.4%	19.4%	14.0%
size or layout of the facility	8	6	48 (19)	20	10
	8.6%	6.45%	51.6%	21.5%	10.8%
lack of familiarity with the equipment/software	22	13	25 (12)	6	4
	22.7%	14.0%	26.9%	6.5%	4.3%
no reason to use the facilities	18	18	40 (18)	9	5
	19.4%	19.4%	43.0%	9.7%	5.4%
no opportunity to use the facilities	9	13	45 (18)	14	5
	9.7%	14.0%	48.4%	15.1%	5.4%
it does not have what I need	1	2	66 (20)	16	7
	1.1%	2.15%	71.0%	17.2%	7.5%
it does not have enough computers	3	9	46 (20)	5	2
	3.2%	9.7%	49.5%	5.4%	2.2%
I personally own sufficient multimedia hardware/software	4	14	57 (20)	14	12
	4.3%	15.1%	61.3%	15.1%	12.9%

Section Three	1	2	3	4	5
<i>I feel that the Multimedia could enhance my academic experience if it had:</i>					

3.1 Computers					
more computers	15	11	64 (22)	0	1
	16.1%	11.8%	68.8%	0.0%	1.1%
faster computers	10	9	73 (23)	3	2
	10.8%	9.7%	78.5%	3.2%	2.2%
Microsoft Windows computers	7	9	69 (24)	0	7
	7.5%	9.7%	74.2%	0.0%	7.5%
Linux/Unix computers	5	7	80 (25)	2	4
	5.4%	7.5%	86.0%	2.2%	1.1%
3.2 Graphics					
more Web graphics software	6	15	66 (22)	2	1
	6.5%	16.1%	71.0%	2.2%	1.1%
more 3-d graphics software	6	11	64 (22)	4	1
	6.5%	11.8%	68.8%	4.3%	1.1%
more animation software	6	10	66 (23)	2	1
	6.5%	10.8%	71.0%	2.2%	1.1%
a printer	9	12	63 (23)	1	1
	9.7%	12.9%	67.7%	1.1%	1.1%
a color printer	15	17	54 (20)	0	0
	16.1%	18.3%	58.1%	0.0%	0.0%
more scanners	11	12	48 (23)	0	1
	11.8%	12.9%	51.6%	0.0%	1.1%
3.3 Audio					
more audio recording equipment	4	7	69 (23)	5	1
	4.3%	7.5%	74.2%	5.4%	1.1%
more digital audio equipment	5	9	64 (23)	6	1
	5.4%	9.7%	68.8%	6.5%	1.1%
more digital audio software	5	10	51 (22)	7	1
	5.4%	10.8%	54.8%	7.5%	1.1%
3.4 Video					
more video recording equipment	4	10	55 (22)	6	1
	4.3%	10.8%	59.1%	6.5%	1.1%
more analog video editing equipment	4	7	67 (22)	7	1
	4.3%	7.5%	72.0%	7.5%	1.1%
more digital video editing equipment	6	11	64 (22)	6	1
	6.5%	11.8%	68.8%	6.5%	1.1%
more digital video editing software	6	11	67 (22)	6	1

	6.5%	11.8%	72.0%	6.5%	1.1%
3.5 Environment					
improved working environment	13	9	61 (20)	1	0
	14.0%	9.7%	65.6%	1.1%	0.0%

¹ *IT Services Mission*, (February 5, 1999). <http://www.gslis.utexas.edu/itservices/mission.html>