

# Improving Student Success: Researching How Students Use Electronic Library Resources

Ethnographic and Qualitative Methods  
Online 2010

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Research Conducted for the  
UNT Libraries



# Research Goal

To investigate how students at the University of North Texas use electronic library services.

# Major Research Questions

1. To create a profile of the typical library user, including student career, external obligations, work style, and technology use.
2. To investigate students' knowledge of and learning about electronic library services.
3. To investigate students' behaviors regarding electronic library services.
4. To investigate students' needs regarding electronic library services.
5. To investigate students' preferences regarding electronic library services.

# Research Population

UNT Students

## Data Collection

14 observations

28 interviews

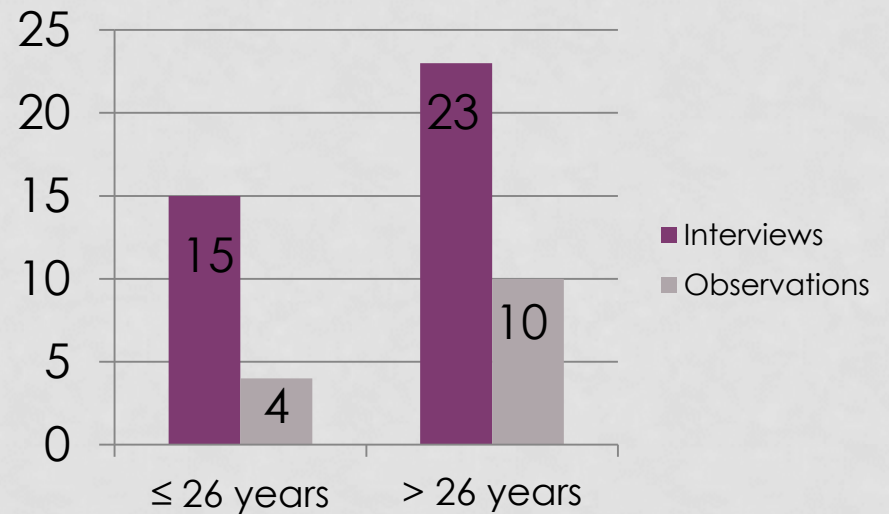
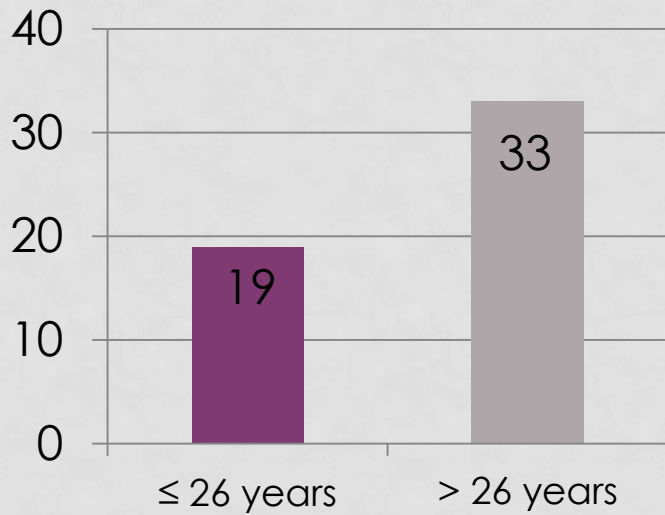
7 focus groups

# Demographic Profile

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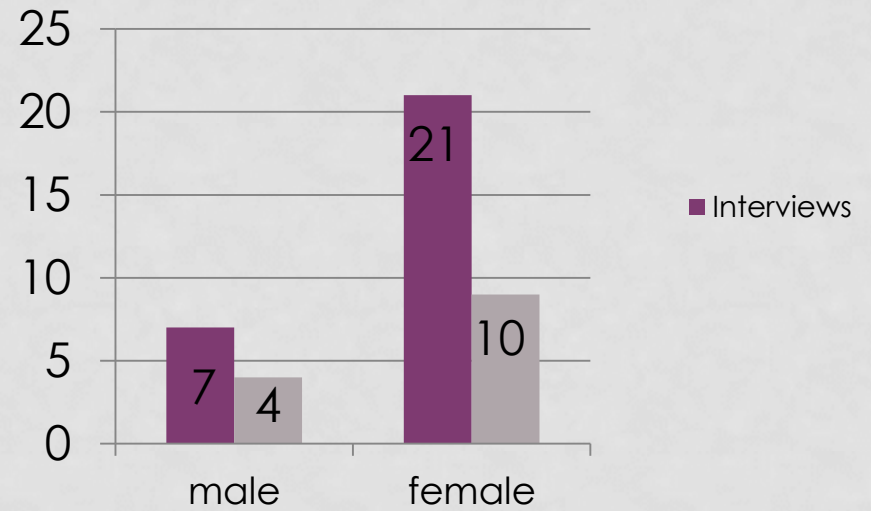
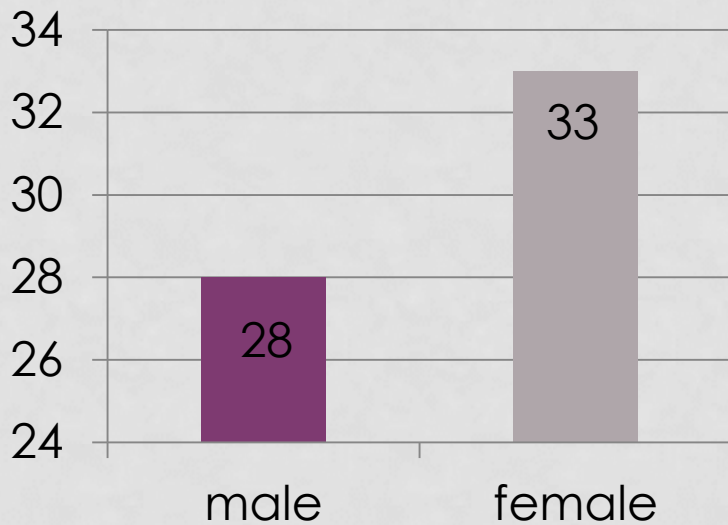


# Age



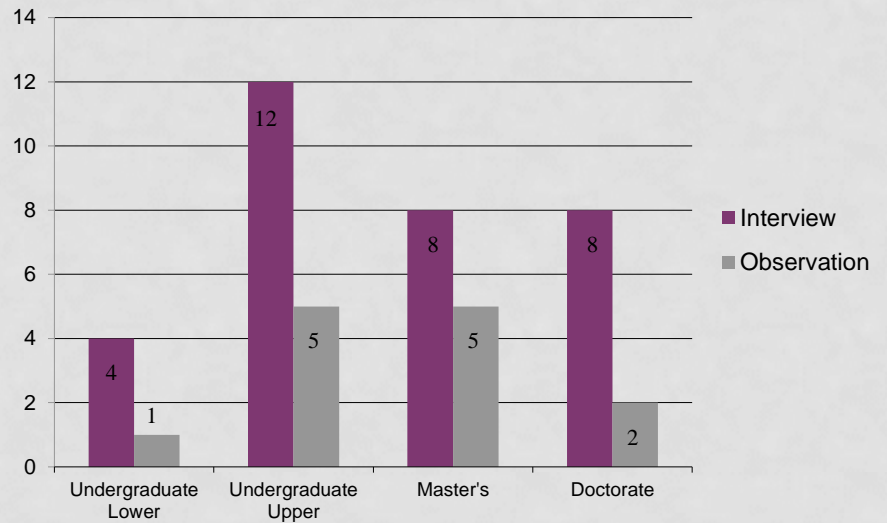
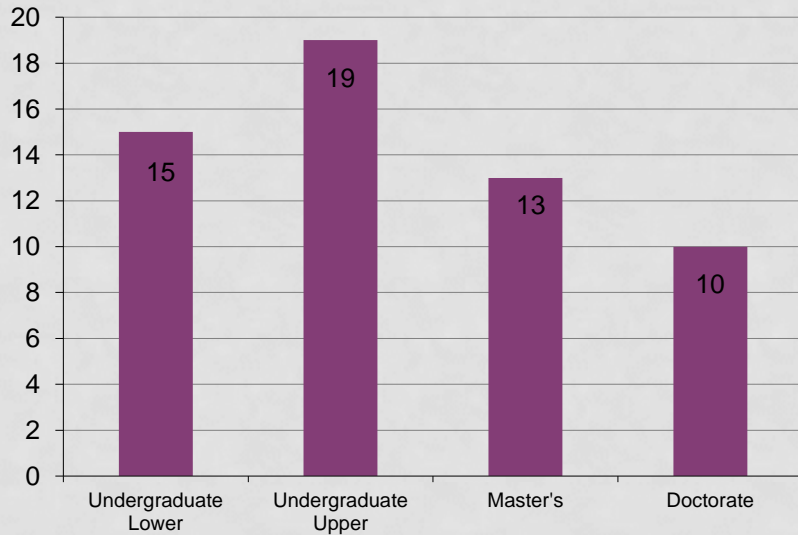
(number of students)

# Gender



(number of students)

# Class Level



(number of students)



# Commonalities

- Most Common Major: Anthropology
- Most Common Colleges: PACS and CAS
- Most Common Cities: Denton and Dallas

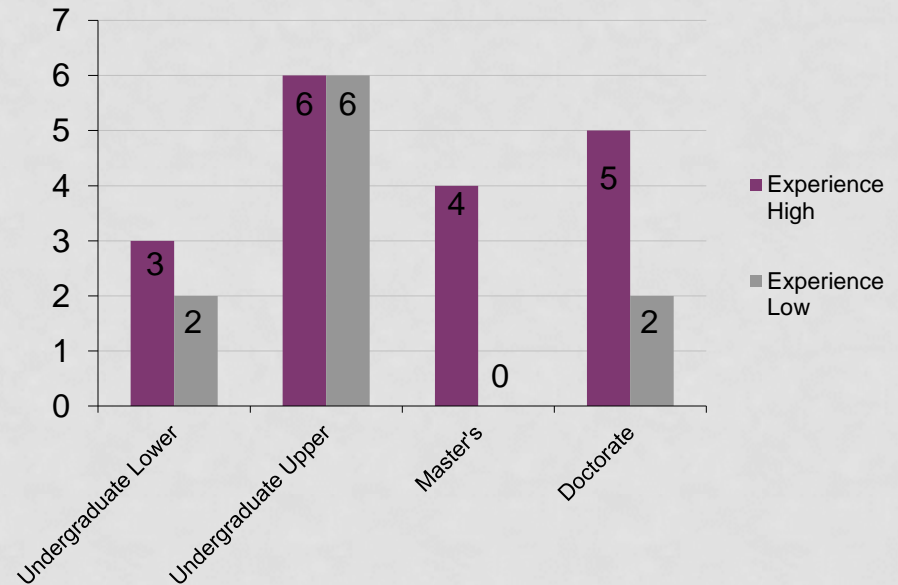
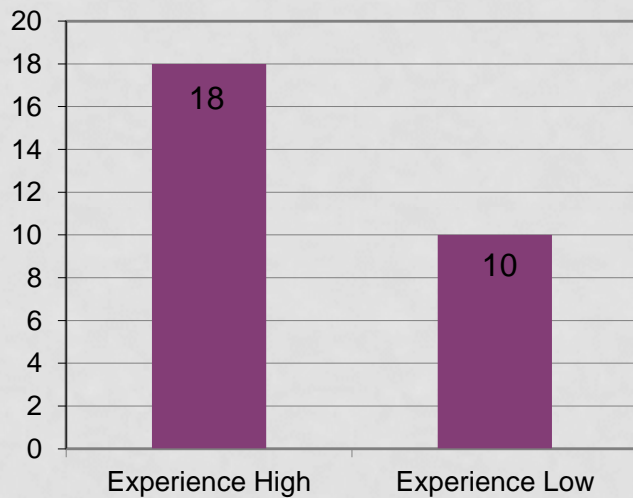
# External Obligations

- Work schedule
  - 13 work < 20 hours per week
  - 21 work > 20 hours per week
  - 5 do not work
- Obligations other than work and school
  - 36 yes
  - 12 no

# Credit Hours and Online Enrollment

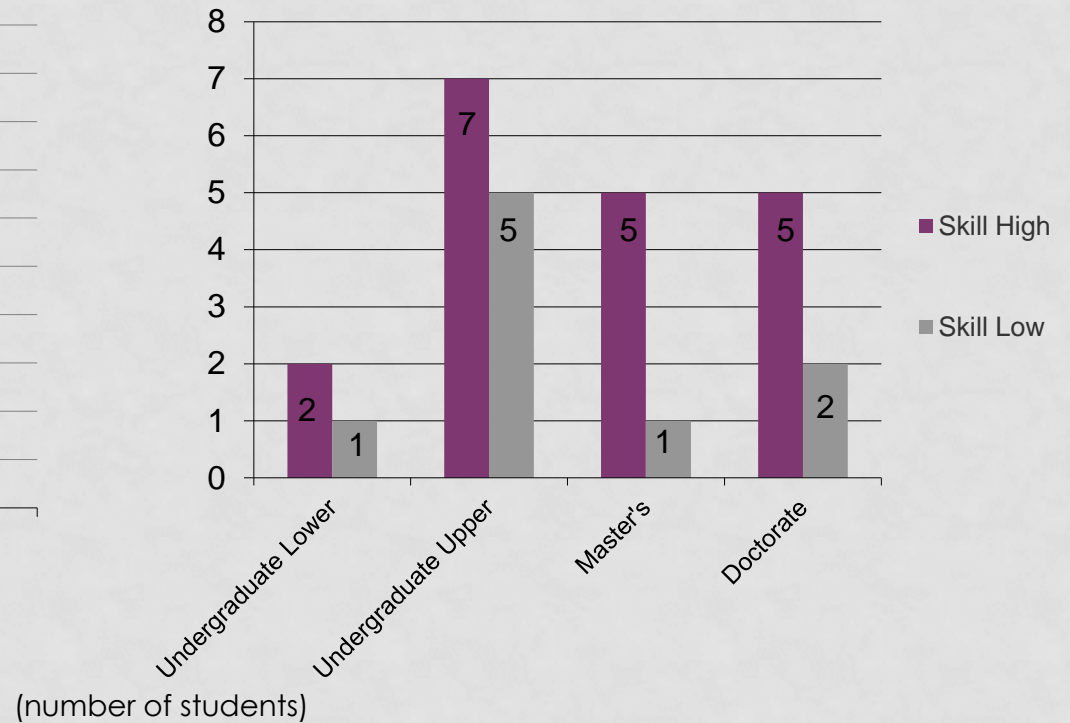
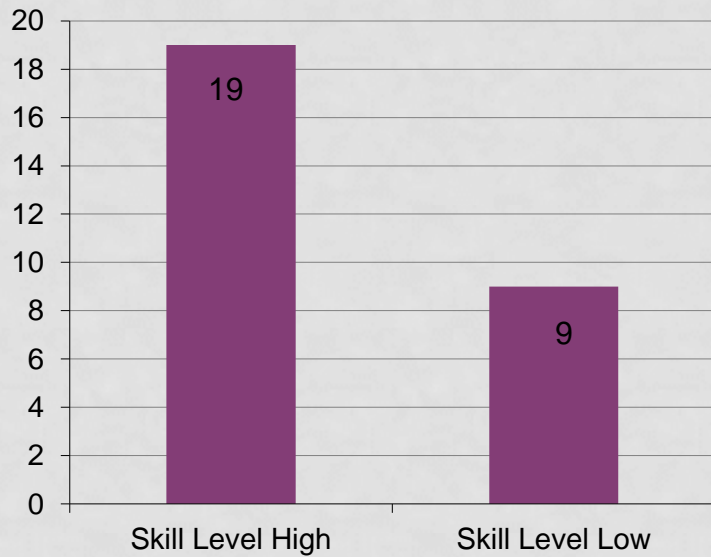
- Undergraduate students average 11.5 hours per semester
- Graduate students averaged 10.5 hours per semester
- 92% of participants reported having taken at least one online course

# Experience Level



(number of students)

# Skill Level



# Disabilities

Disabilities:	4	13%	all visual-related
Disadvantages:	2	6%	age; connection

# Personal Resources

Desktop 43%

Laptop 100%

Mac Users 16%

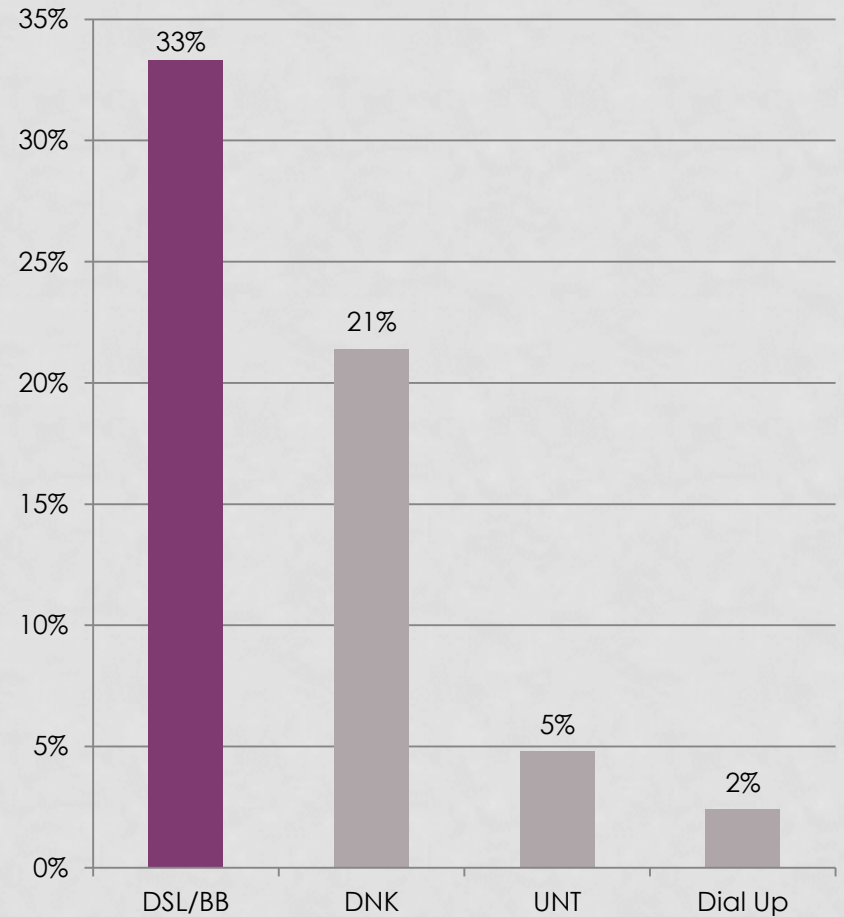
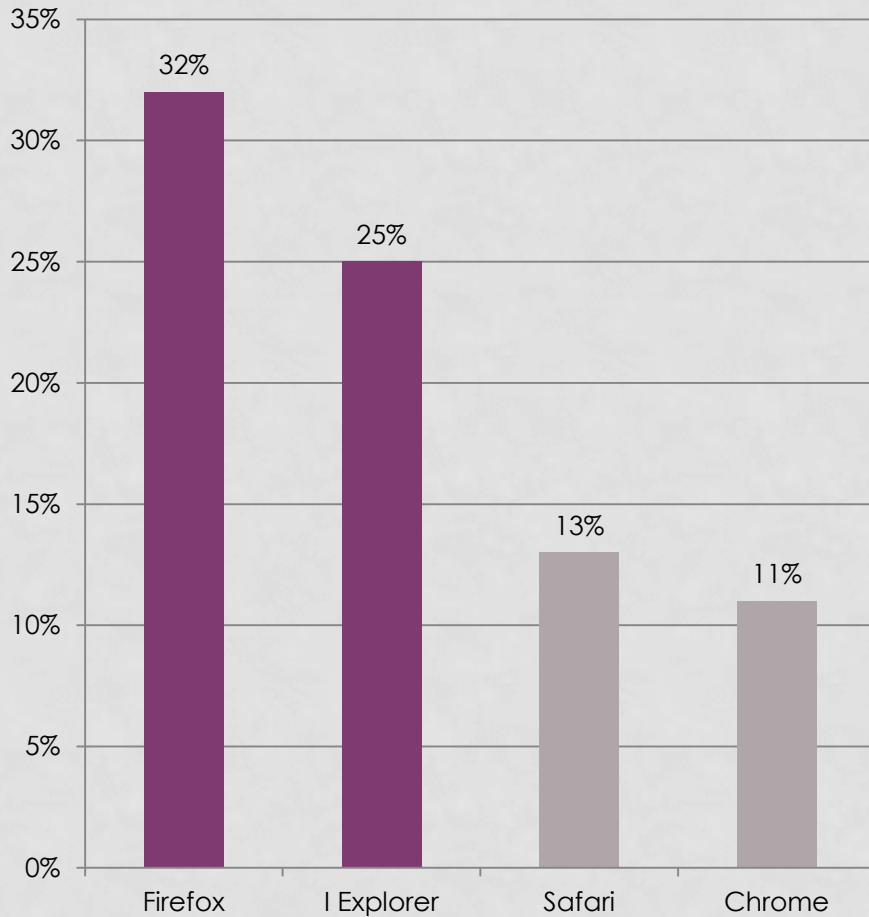
PC Users 86%

Personal Printer 58%

UNT Printer 42%

***\* 27% of students who own printers proactively offered that they use UNT's printers to save money.***

# Browser and Connection





# Satisfaction with Resources

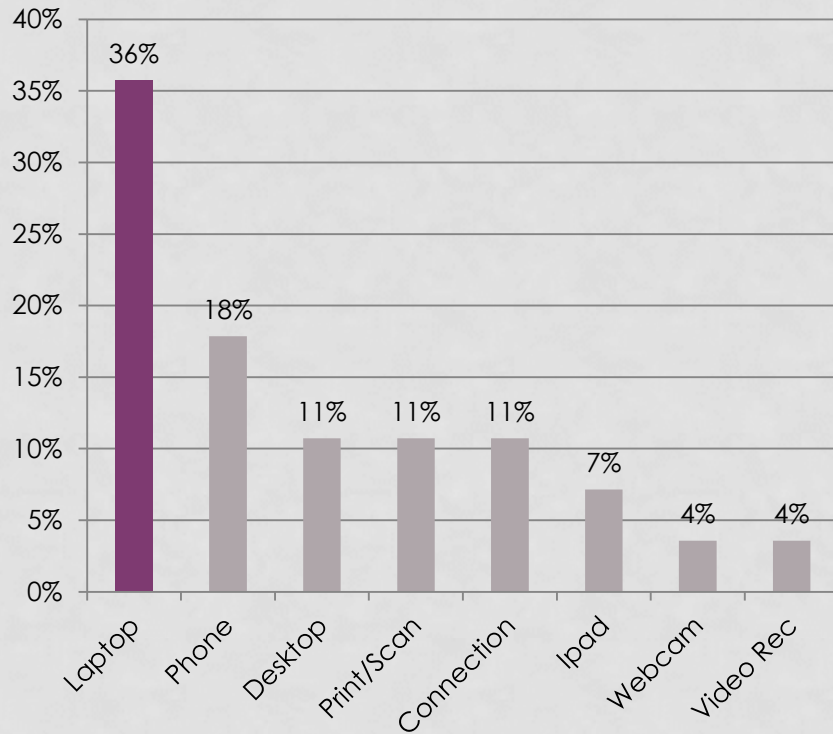
- Adequate/Satisfied

UNT	8	87.5% satisfied
Personal	13	92.3% satisfied
Unclassified	8	100% satisfied

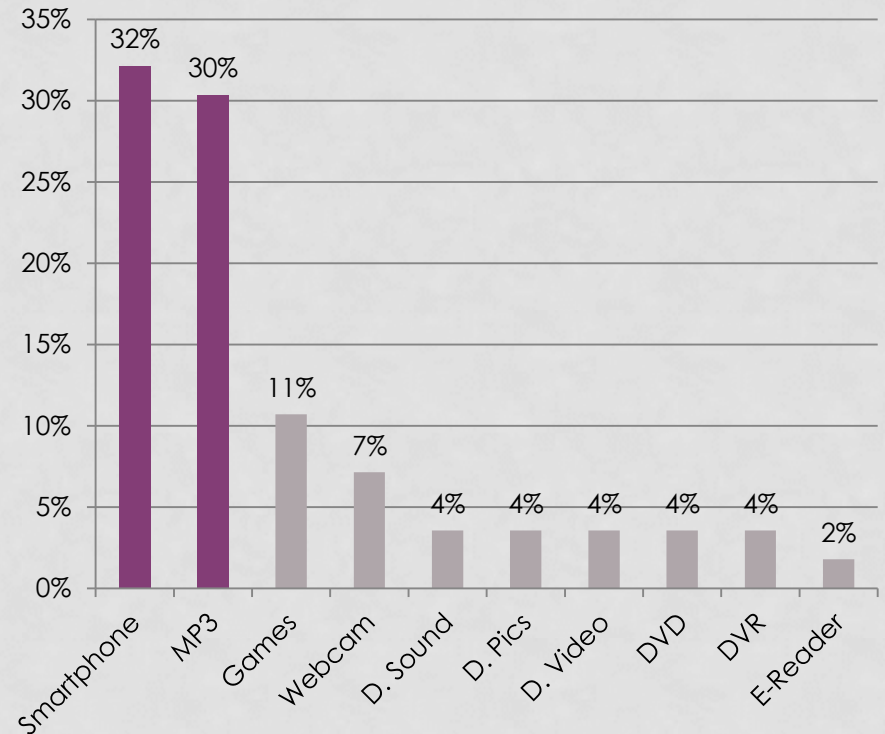
- Inadequate/Dissatisfied

UNT	1	12.5%	color printer availability
Personal	1	7.7%	rural area/dial-up

# Research and Other Devices



**Preferred Devices for Research**



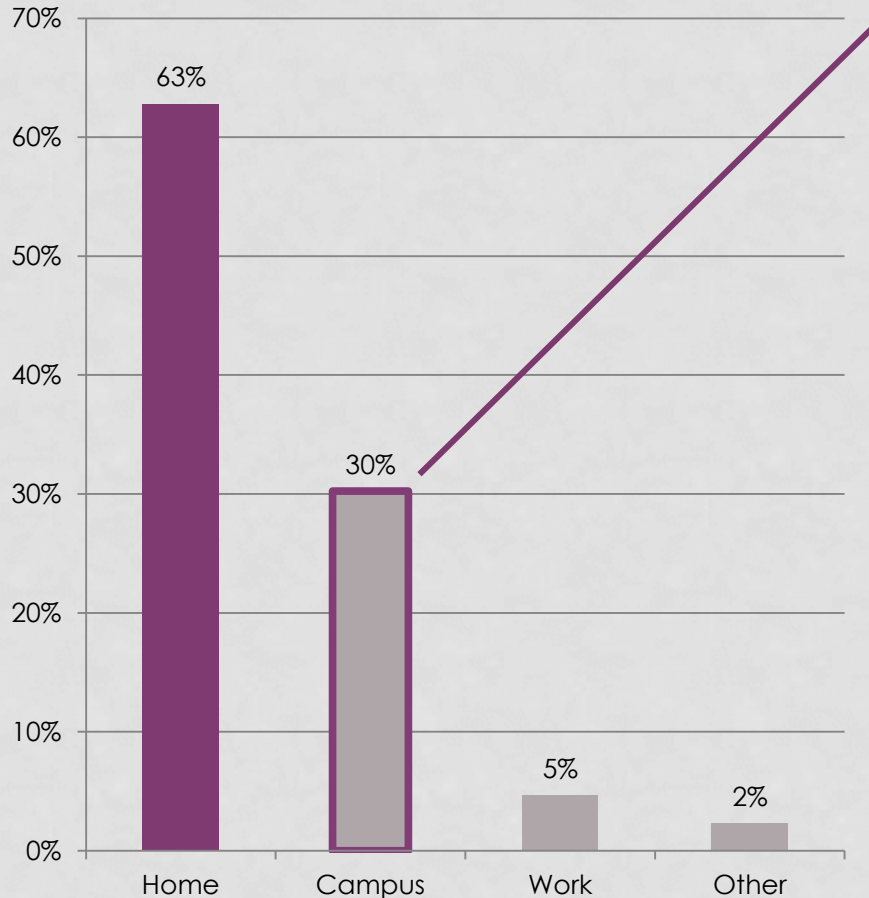
**Other Devices Owned by Students**

*\* Multiple respondents desire a UNT Mobile Application that would permit quick searches for later download. Application enabled devices such as smartphones are owned by >50% of all students.*

# Time and Day Preferences

- Students work on research every day of the week
  - Friday is the least preferred day
- Most students prefer to work at home
  - 26% accessed from both home and the UNT Library
- Most students prefer to work in the evenings

# Location Preferences



## Campus Users:

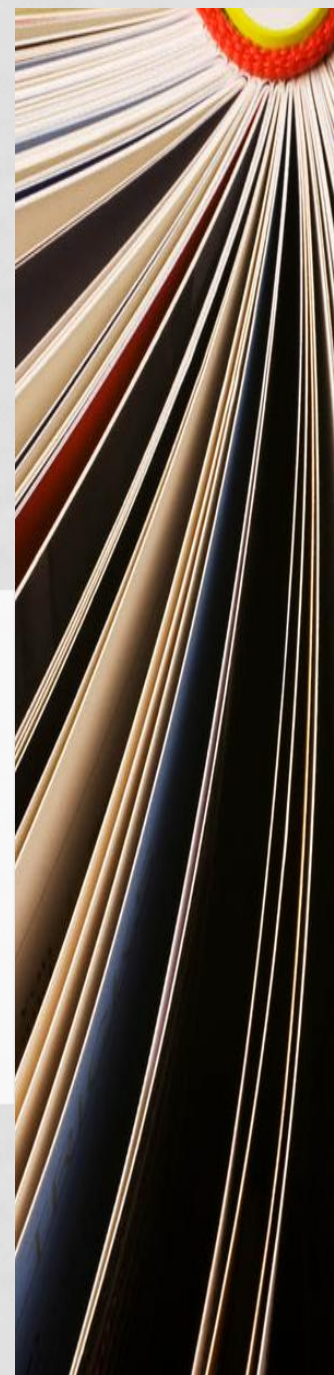
62% via library

31% via lab or building

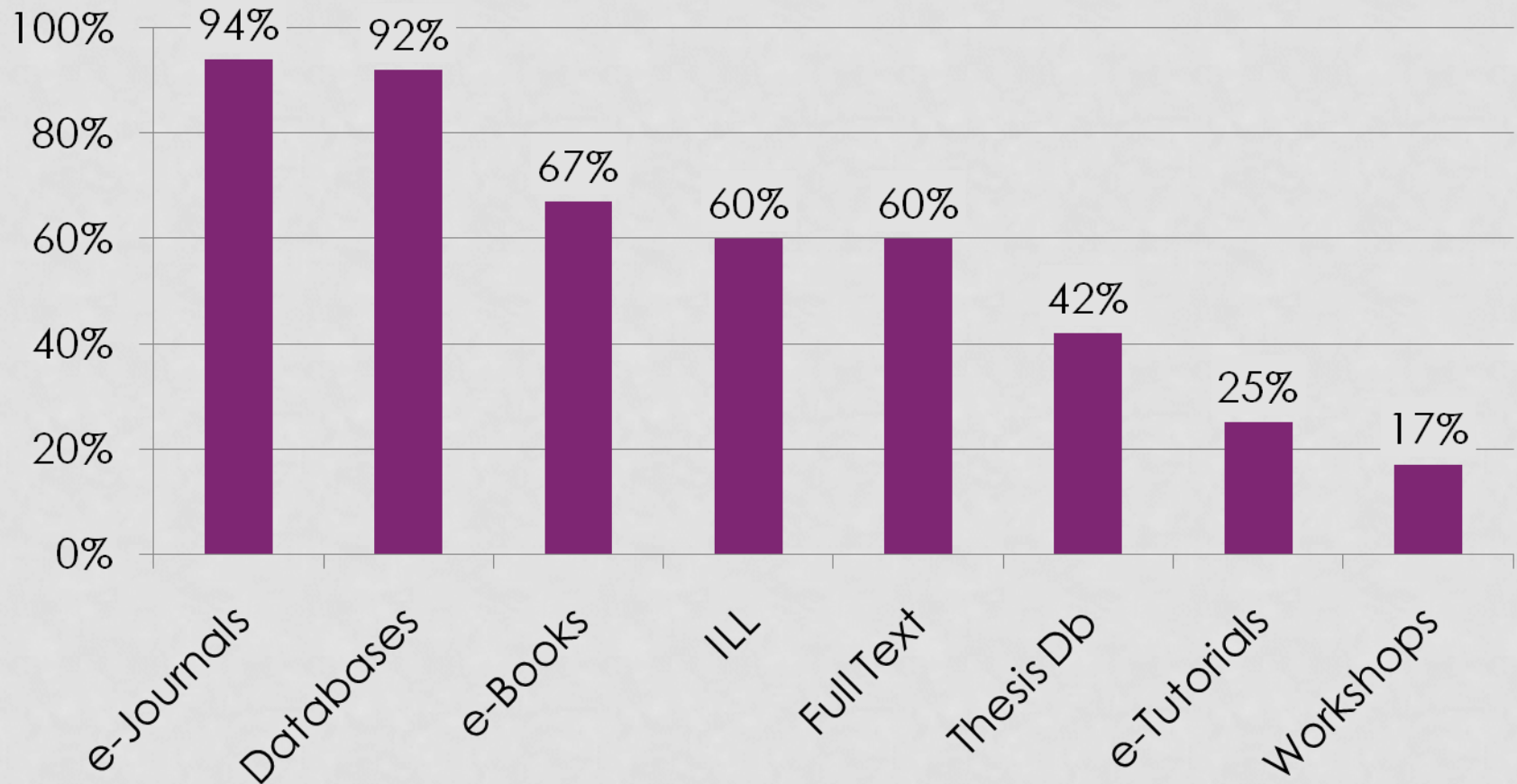
15% via classroom

# Knowledge of UNT Electronic Resources

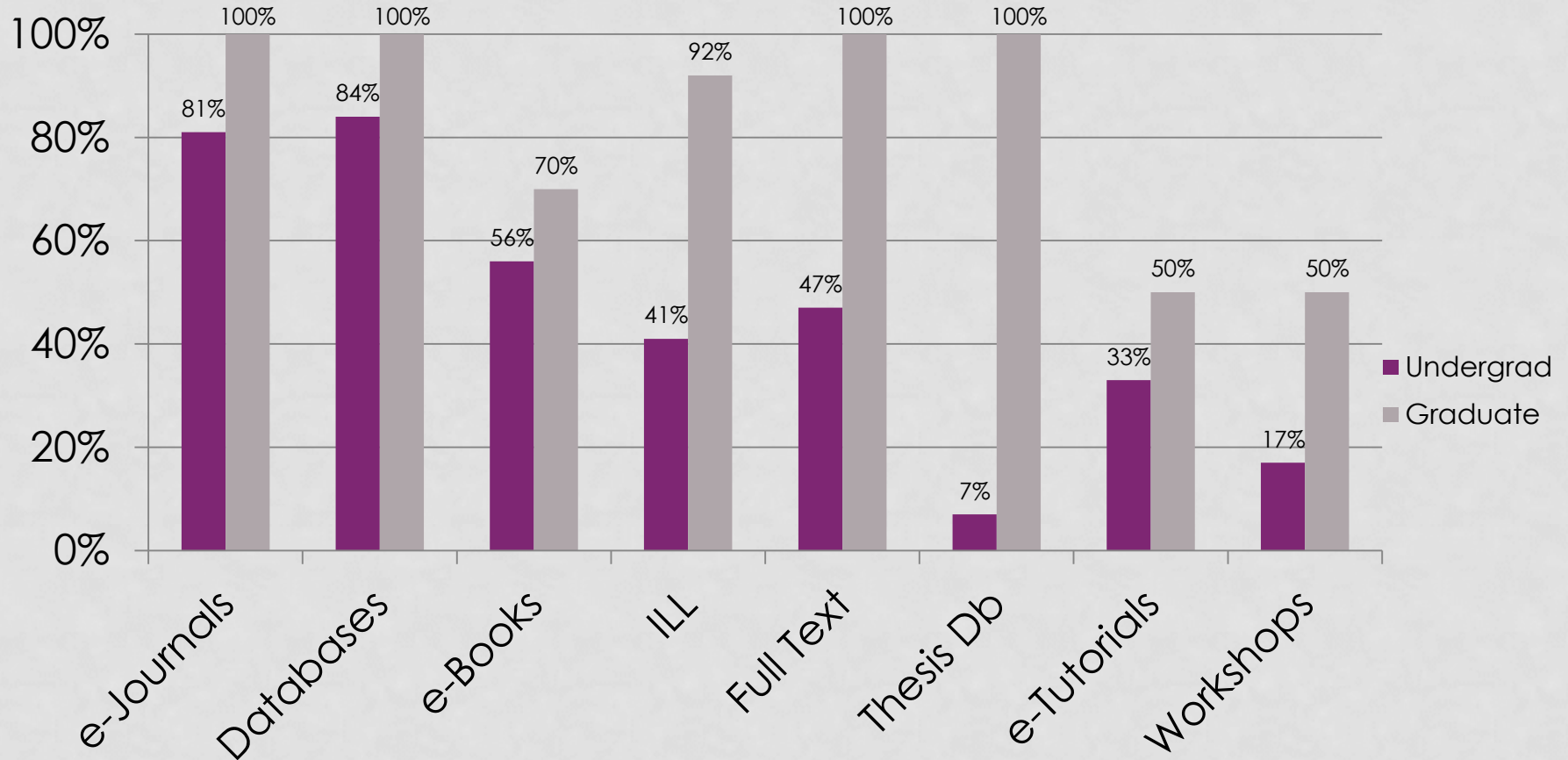
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# Awareness of Resources

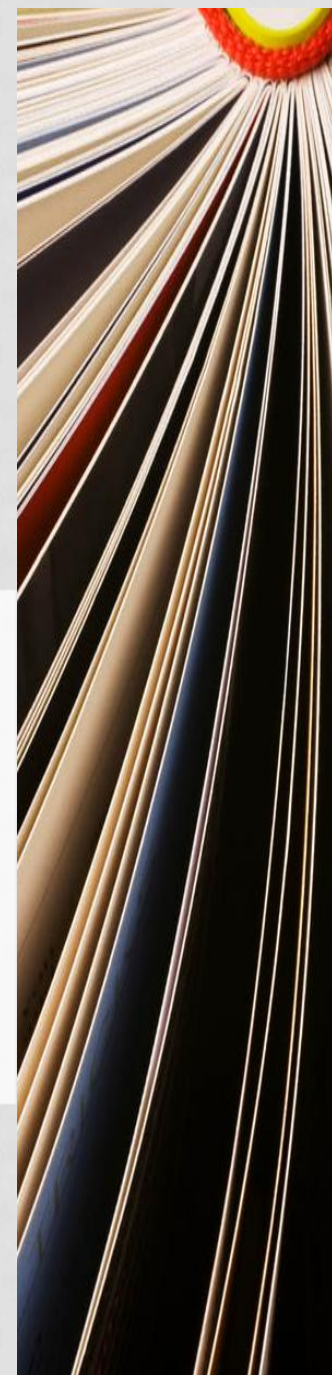


# Awareness by Degree Level



# Library Instruction

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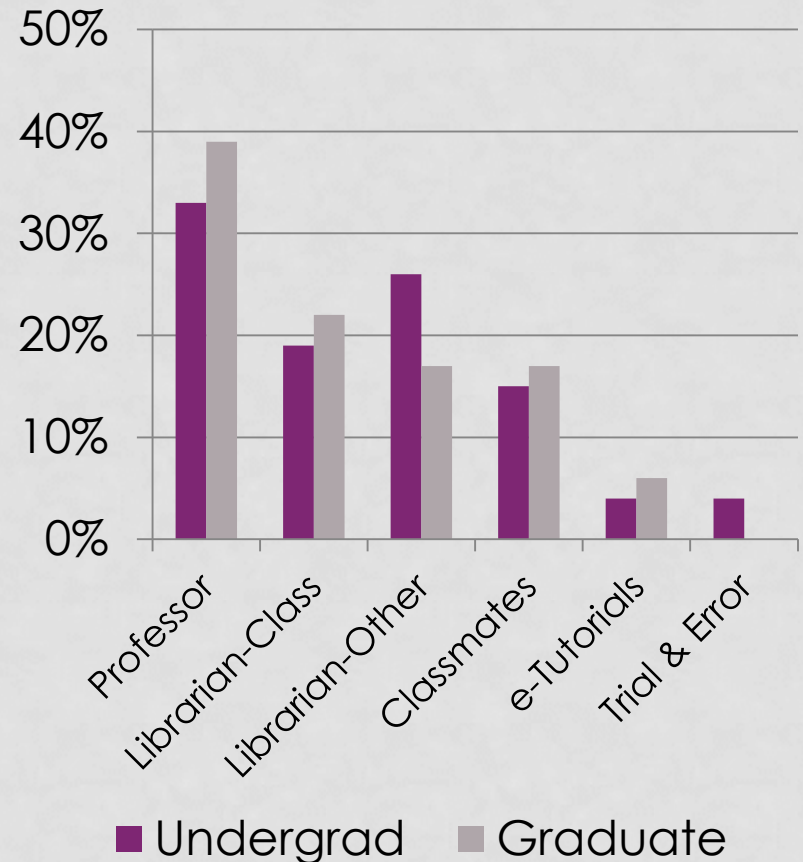




# Learning About Resources

- Majority in class—by professor and/or by librarian for the class
- Retention higher for class-specific orientation than for general orientations

***“As a grad student, I was expected to know how to use it already.”***



# Past Instruction

## Overall Experience with Each Instruction Method

In Library Instruction	In Class Instruction	Had Neither	Tutorial: Know	Tutorial: Use
62%	62%	12%	40%	17% (2%)

### Grads vs. Undergrads

- Grads had been given more instruction
- PhD. vs. Masters
- Lower vs. Upper Undergraduates

### Ability Ratings

- All 3 ratings high
  - Lowest instruction levels
  - Among the most likely to be aware of the tutorials
  - Highest online and in person tutorial use

# Library News & Information

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# Resource Information & Updates

## Popular Suggestions

- E-mail News and Updates
- Instruction Sessions
- Tutorials / Workshops

## Additional Suggestions

- Newsfeed / Blog
- Professors
- Blackboard
- Handouts or Flyers
- User Directed Updates
- Research Course

# The General Research Process

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# Students' Lack of Research Skills

## Observation Behaviors

- Students enter too many words in the search boxes
  - yielding no results
  - ex: *“City downtown west side prior to 1950 art architecture”*
- Students enter irrelevant or incorrect words in the search phrase
  - ex: *“The journal of ABC Example”* in a keyword search box

# Students' Lack of Research Skills

## Observation Behaviors

- *Narrow* search for specific resource
- *Broad* search on specific subject
- *Browsing*
  
- Lacking sufficient research skills, students were observed employing ineffective research strategies to achieve their objectives and therefore showing frustration

# No Single Method or Resource Used by Students

- Students used a variety of methods for collecting research
  - some utilizing Google or Google Scholar to locate resources
  - then following up with UNT search
- Students enjoy Google's "single search box" ease of use.

*"There's nothing you can't find on Google."*

*"Google is simple, it's user-friendly."*



# Lack of Library Training

- *Some* students with little to no library training
  - Mentioned specific UNT electronic resources as primary research resources
- *All* students who *only* rely upon general search engines (like Google and Yahoo) as research resources
  - Had *no* library training

# Research Savvy Students

- More experienced students tended to use a favorite database, accessing through another school or source if not accessible through UNT

# Strengths of UNT Electronic Resources

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# Perceived Strengths

## Comprehensive

- Breadth and depth of information
- Reliability and credibility of information

## Convenient

- Convenience and flexibility of access
- Especially true for distance learners

## Features

- Specific features and functions, e.g.:
- *Refworks, advanced searches, search results display, ILL*

# Perceived Strengths

- Those most comfortable with site:
  - Older students (over age 26)
  - Students who report higher degree of comfort/skill level with library site
    - Have taken training class, or familiar with other sites already

# Barriers to Using UNT Electronic Resources

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# Perceived Barriers

## Lack of familiarity with:



Site

- A steep learning curve
- Breadth and scope overwhelming, intimidating
- Layout/design makes it difficult to navigate



Search

- Challenging overall (independent of site)
- Search = trial and error. Very inefficient
- Don't know what key words to use in general
- Not skilled at search overall
- More advanced search functions on site are overwhelming

# Perceived Barriers

## Search results

- Not always helpful/relevant
- Book review links not useful
- Inconsistent results
- Abstracts not always available

## Databases

- Options confusing
- No search function that spans all databases for subject area

## Resources

- Not always adequate for needs (e.g., Communications and Biology)



# Perceived Barriers

## Services

- Interlibrary loan takes too long (e.g. 3-4 weeks)
- Certain databases simply not available

## Formats

- Journal articles not available in full-text PDF format
- E-books not always viewable

## Technical

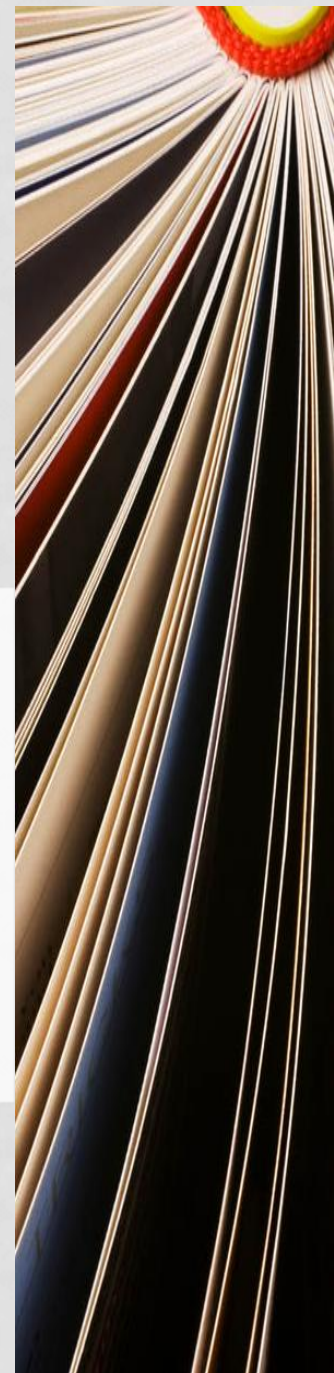
- VPN for distance learners a major challenge
- Compatibility issues (especially for Mac/Safari users)

# Perceived Barriers

- Those least comfortable with site:
  - Undergrads and younger students who use site less frequently
- Gap exists between perceived and actual skill levels and resulting degree of confidence
  - Many challenges and frustrations due to lack of familiarity, not actual functionality
  - Students not aware of all available resources
  - Technical issues may be due to user error
  - Poor search skills may be more to blame for poor search results

# Research Roadblocks and Getting Help

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# Overcoming Roadblocks

## Technical

- Start over, returning to UNT Library homepage
- Come back later

## Inaccessibility

- Disregard source
- Change topic and/or direction of assignment

## Ask

- Over 60% ask a librarian
- Classmates or friends

# Ideal Ways of Receiving Help

- 24 hour assistance or extended hours
- Online chat, email, and phone
- Students value personal contact and personalized service
  - Sharing a desktop or video chat
- Most cited concern
  - Length of time to receive a response

# Librarians

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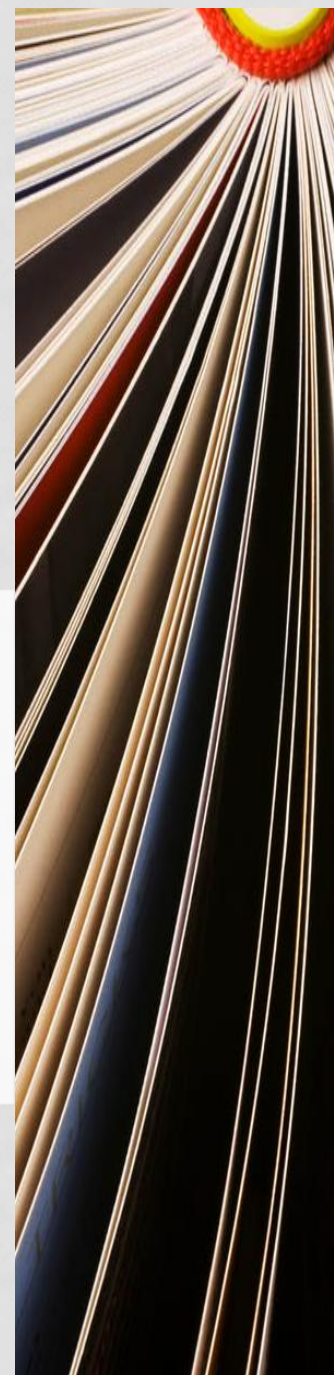


# Positive Reviews for Librarians

- 80% reported working with a librarian on at least one occasion
- Librarians - extremely responsive and helpful
- No reported negative experiences
- “Ask a Librarian” helpful
- Library tours and training

# Managing Information

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# Managing Information

Students mentioned that they would do one or more of the following with the information collected while conducting research:

- Save on hard drive or USB thumb drive
- Cut and paste directly to document
- Save a bookmark
- E-mail link to themselves



Most students reported no problems managing information.



# The UNT Libraries Website

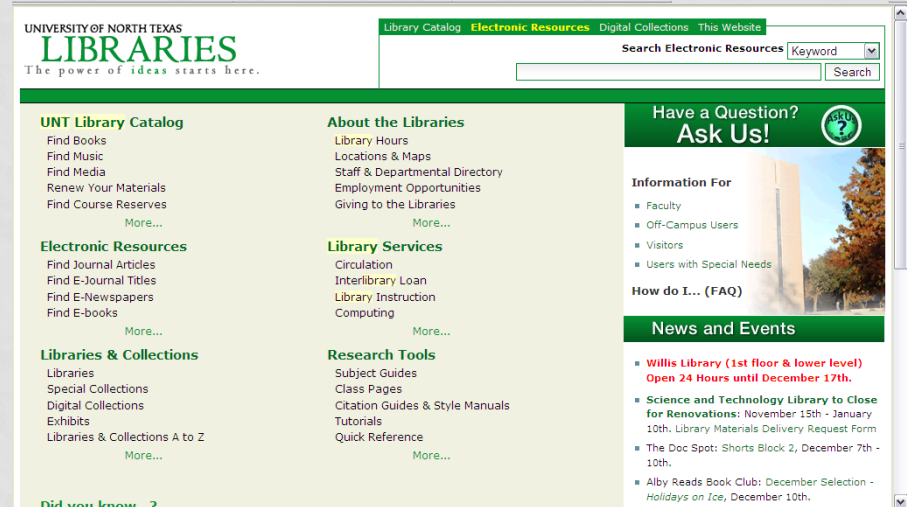
UNT Libraries

# The UNT Libraries Homepage

- Access

***“You have to hunt around for another small link”***

- The UNT Homepage
- Google
- Bookmarks



- Function - Size of text and information organization

***“A library site should know its top three or four things that people want”***

- Aesthetics - Color choices and imagery

***“I think people remember things better when there’s a visual there.”***

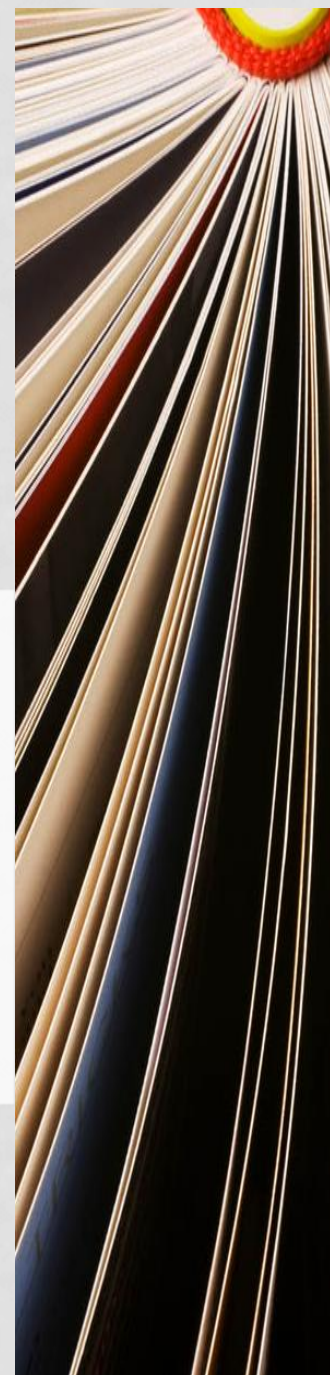
# Searching the UNT Libraries Website

*“I spend more time navigating than doing actual research”*

- Defining a successful search
  - Finding credible sources in a timely manner
  - Finding multiple sources through the best possible search database
  - Having multiple options to find multiple sources
- Student problems with search format
  - Understanding how to use the Electronic Resources
  - Running into issue involving configuration (pop-up problems, off-campus compatibility, and log-in frequency issues)

# User Suggestions

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# User Suggestions

- Creating links to perform searches based on college or course
- Integrating explanations of electronic resources
- Creating tabs of search results by format
- Using a format for article searches similar to Google scholar
- Beginning search process on library homepage rather than links to other information



# Recommendations

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# Recommendations

- Improve user experience
  - Make website more visually attractive
    - Work with graphic design department
  - Design integrated or umbrella search tool
    - Other universities have Google Scholar integrated with their websites
  - Design possibility to personalize library website
    - (e.g. - my.library.unt.edu)



# Recommendations

- Improve library instruction
  - Use professors as a resource for training students
  - Tiered levels of training
    - Google is making people overconfident because it is forgiving of poor search terms
    - Offer basic tutorials *and* more advanced tutorials
      - Both should be quick and interesting video tutorials
      - Some suggestions
        1. How to perform a successful search
        2. Tutorials for new research projects

# Recommendations

- Improve communication
  - Create printout catalog of the site
    - Explanation of different databases
    - Explanation of what databases can be used for
  - More publicizing of the library URL
  - More publicizing of the tutorials