

2007 Global Faculty E-book Survey

Sponsored by ebrary

INTRODUCTION

In Fall 2007, ebrary worked with more than 200 librarians from around the world to develop an informal survey to better understand faculty experience with e-resources and print materials. The survey focused on the higher education community, and key learning objectives included the following:

- Usage for research and instruction
- Attitudes
- Perceived strengths and weaknesses
- Instruction experience and preferences

Libraries of all types, worldwide, were encouraged to invite their faculty members to participate in the survey. We did not intentionally promote the survey directly to faculty members due to librarians' feedback.

The survey was promoted primarily through the ebrary website and our newsletter distribution list, which includes nearly 19,000 librarians, representing approximately 7,000 individual institutions. Approximately half of these institutions are located in North America, the other half in the rest of the world.

All participating institutions were entered into a drawing for free perpetual access e-books from ebrary. Libraries were also given the option of receiving survey results specific to their institution.

The survey was created using an online tool called Survey Monkey and was available for approximately one month.

We are pleased to announce that a total of 906 respondents completed the survey, representing nearly 300 individual higher education institutions, from approximately 38 countries.

We truly appreciate the overwhelming support from the library community, as well as their institutions' faculty members, in making this survey a success. We'd like to extend a special thank you to Susan Gibbons, Associate Dean, River Campus Libraries, University of Rochester, and Allen W. McKiel, Ph.D., Director of Libraries, Northeastern State University, who went well beyond the call of duty in helping us develop the survey and analyze the results. Allen has provided an insightful analysis, which is included with the survey results.

We hope that you find the Global Faculty E-book Survey interesting and useful. If you have any questions or comments, please email marketing@ebrary.com.

Sincerely,
The ebrary Team

CONTENTS

Survey Results, 3

1. Dates of survey, 3
2. Total number of respondents, 3
3. Participating countries, 4
4. Basic Carnegie classification for U.S. institutions, 5
5. Primary Program, 6
6. Respondent's primary program by category, 7
7. Do you or have you offered a course with an online component?, 8
8. Number of years as a faculty member in higher education?, 9
9. How would you describe your level of computer literacy?, 10
10. How would you describe your level of awareness of electronic resources at your library?, 11
11. What types of electronic resources and tools do you currently use for your research, class preparation, or instruction?, 12
12. How do you currently integrate the use of e-journals into your courses?, 13
13. How do you currently integrate the use of e-books into your courses?, 14
14. How do you find out about electronic resources available through your library?, 15
15. How would you characterize electronic access to journals as compared to print?, 16
16. How would you characterize electronic access to books as compared to print?, 17
17. How would you characterize the value of search engines like Google when you are doing research or preparing instruction?, 18
18. Do you prefer using online resources or print for your research, class preparation, and instruction?, 19
19. Please estimate the percentage of information resources for research, class preparation, and instruction that you access electronically as compared to print, 21
20. What are the advantages and/or disadvantages of PRINT resources for your research or instruction?, 22
21. What are the advantages and/or disadvantages of ELECTRONIC resources for your research or instruction?, 23
22. Which of the following online resources do you think are appropriate for use by your students for most of your assignments? , 24
23. What types of electronic resources do you ask your students NOT to use for your assignments?, 25
24. Are students required to use print or electronic resources for assignments in your courses?, 26
25. Where do you think students are accessing most of the information resources beyond the textbook and handout that they use for your assignments?, 27
26. What are the difficulties associated with information resources?, 28
27. Of the following instruction methods for information literacy, which would you be willing to have for your course?, 29
28. How necessary do you believe instruction in information literacy is to student research and learning?, 30
29. Do technical difficulties impede use of electronic resources at your institution?, 31
30. What do you feel would make e-book usage more suitable for use in your area?, 32
31. Would you prefer your library to own or subscribe to e-books and why?, 33

Related Papers, 35

Survey analysis by Allen McKiel, Director of Libraries, Northeastern State University, 35

Contact ebrary, 46

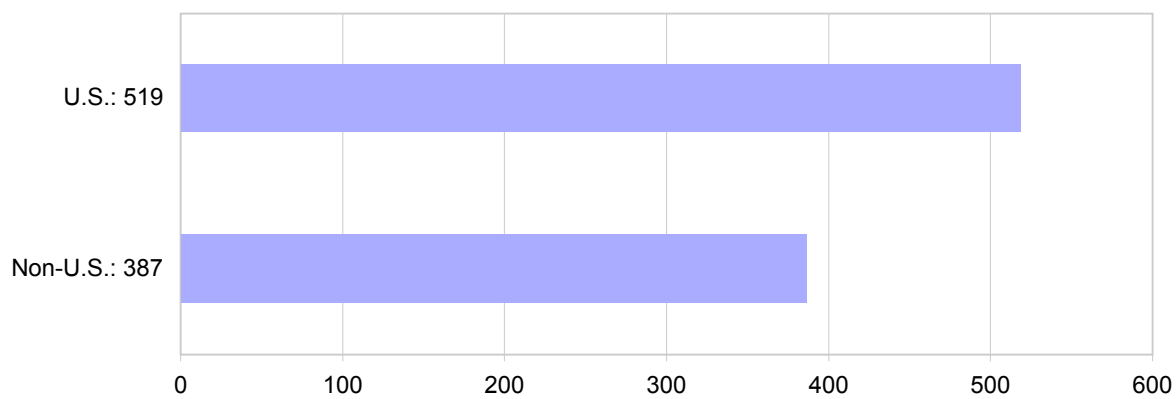
Survey Results

DEMOGRAPHICS/OVERVIEW

1. Dates of survey

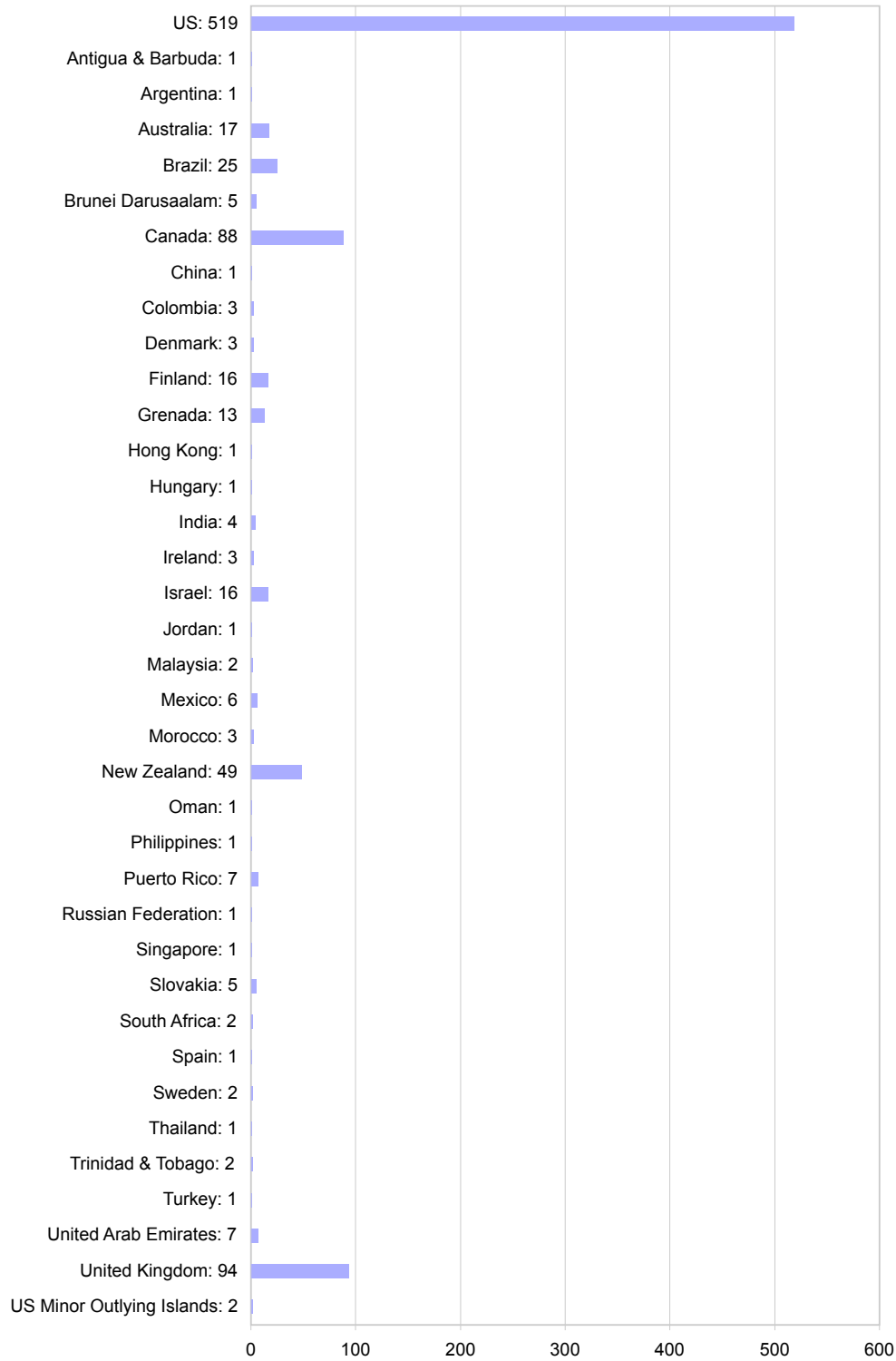
The survey started on September 12, 2007, and ended on October 10, 2007.

2. Total number of respondents



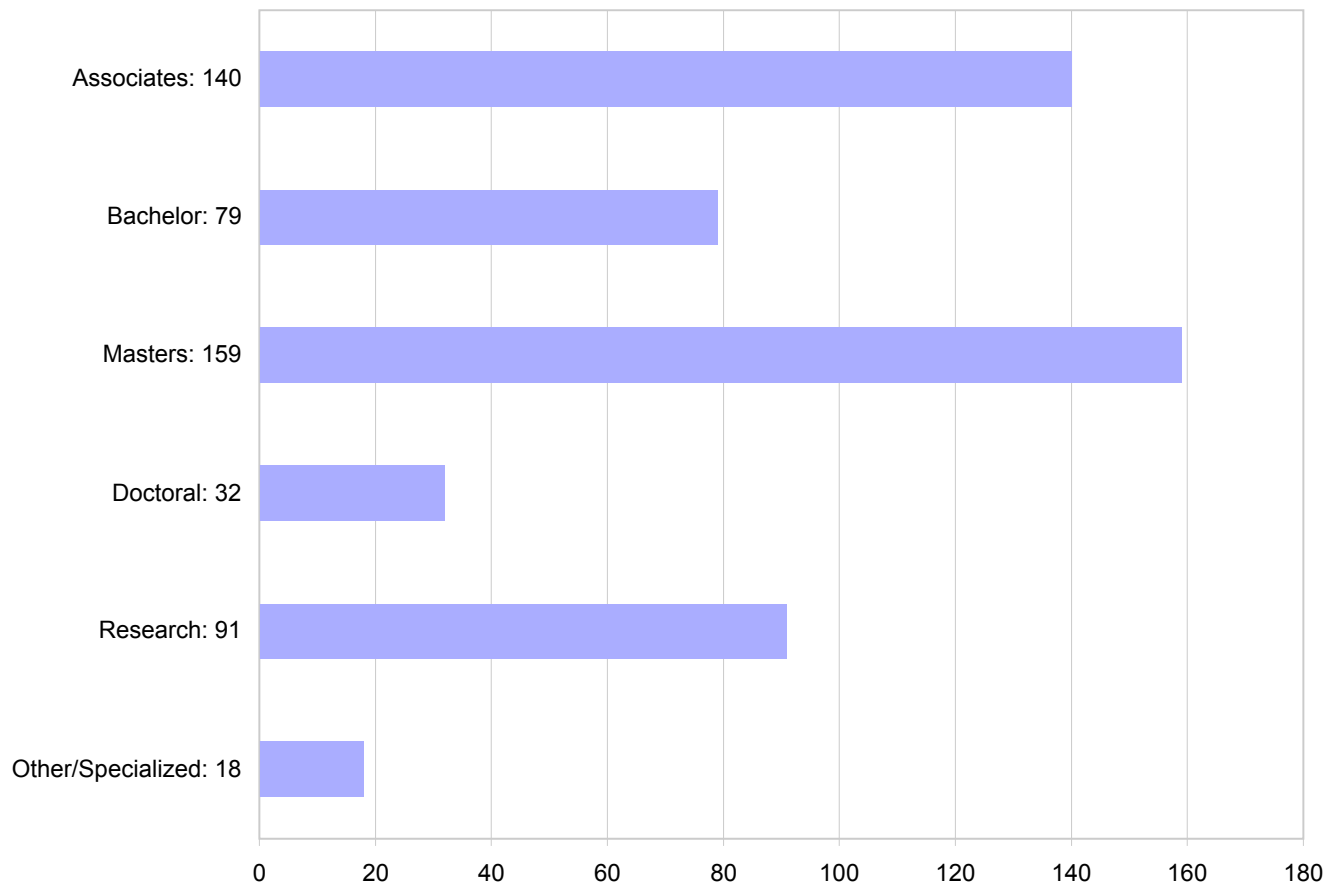
Number of respondents: 906.

3. Participating countries



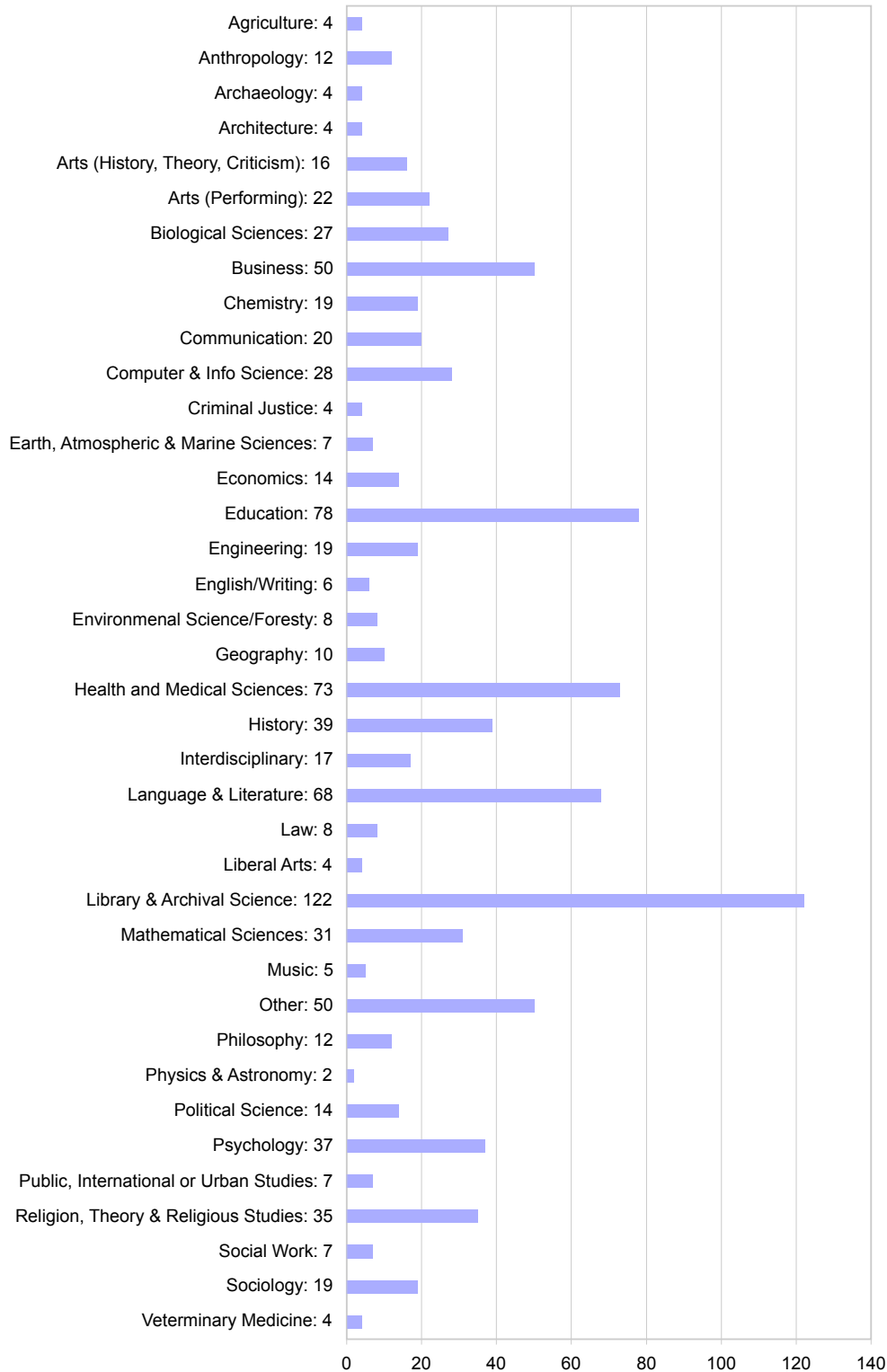
Number of respondents: 906.

4. Basic Carnegie classification for U.S. institutions



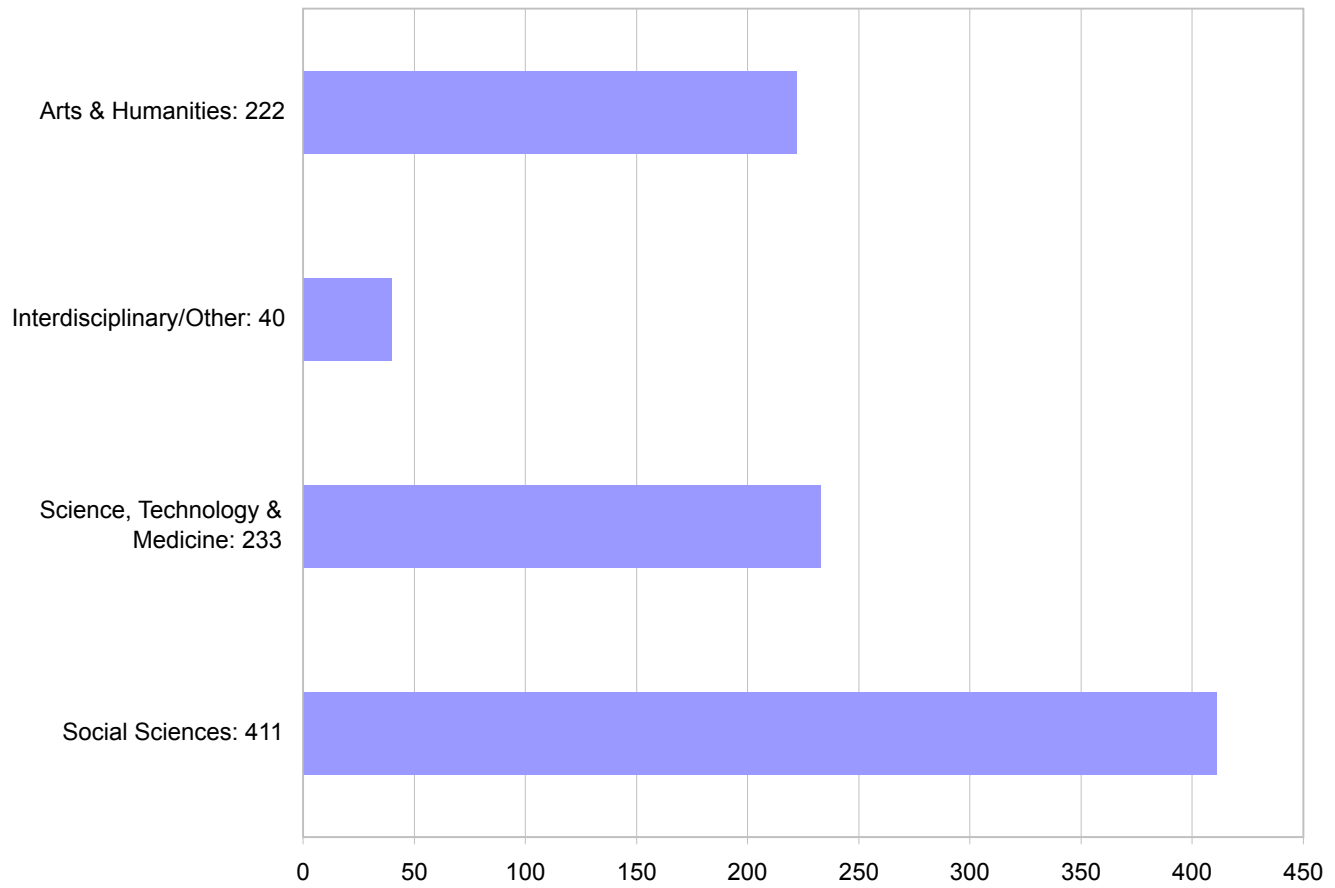
Number of respondents: 519.

5. Primary Program



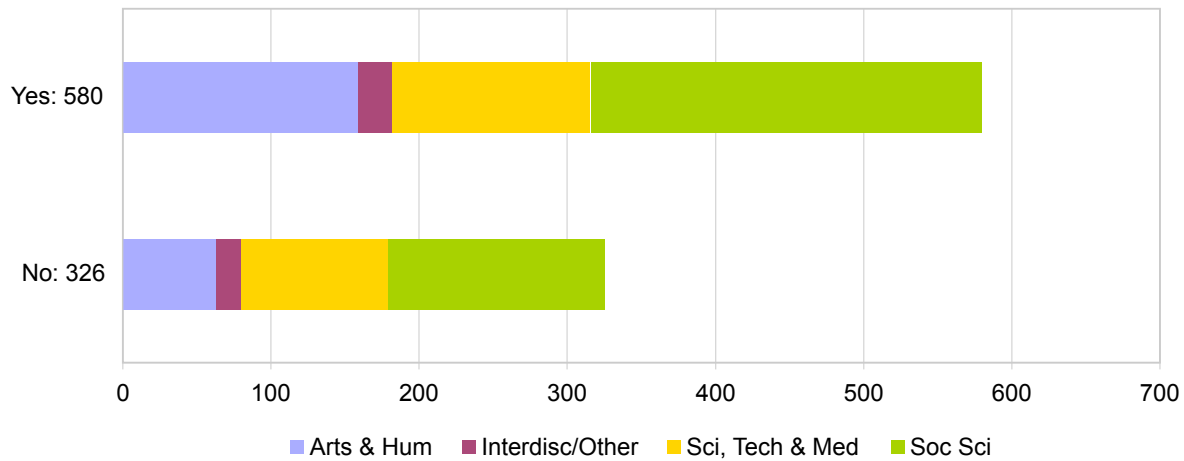
Number of respondents: 906.

6. Respondent's primary program by category



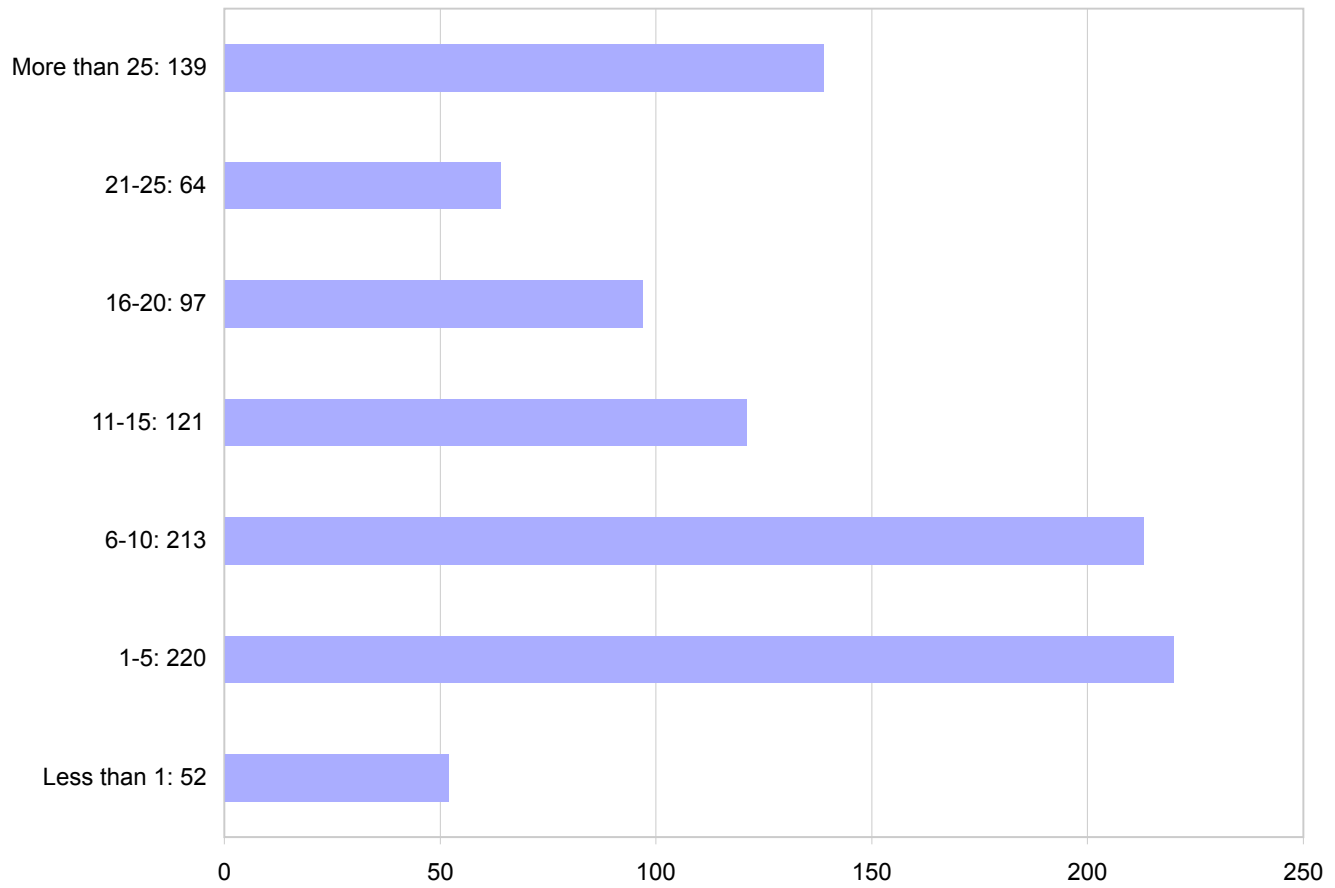
Number of respondents: 906.

7. Do you or have you offered a course with an online component?



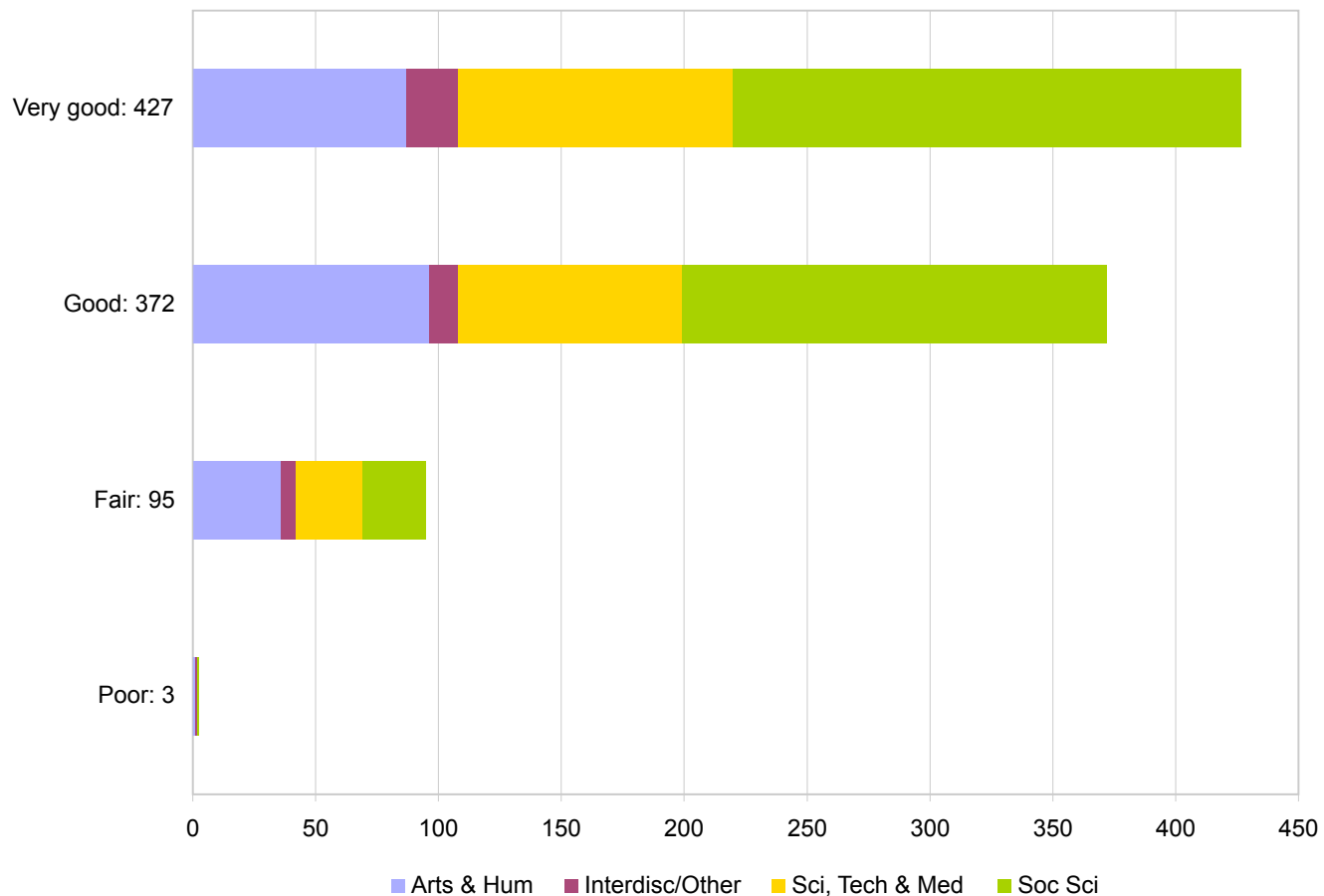
Number of respondents: 906.

8. Number of years as a faculty member in higher education?



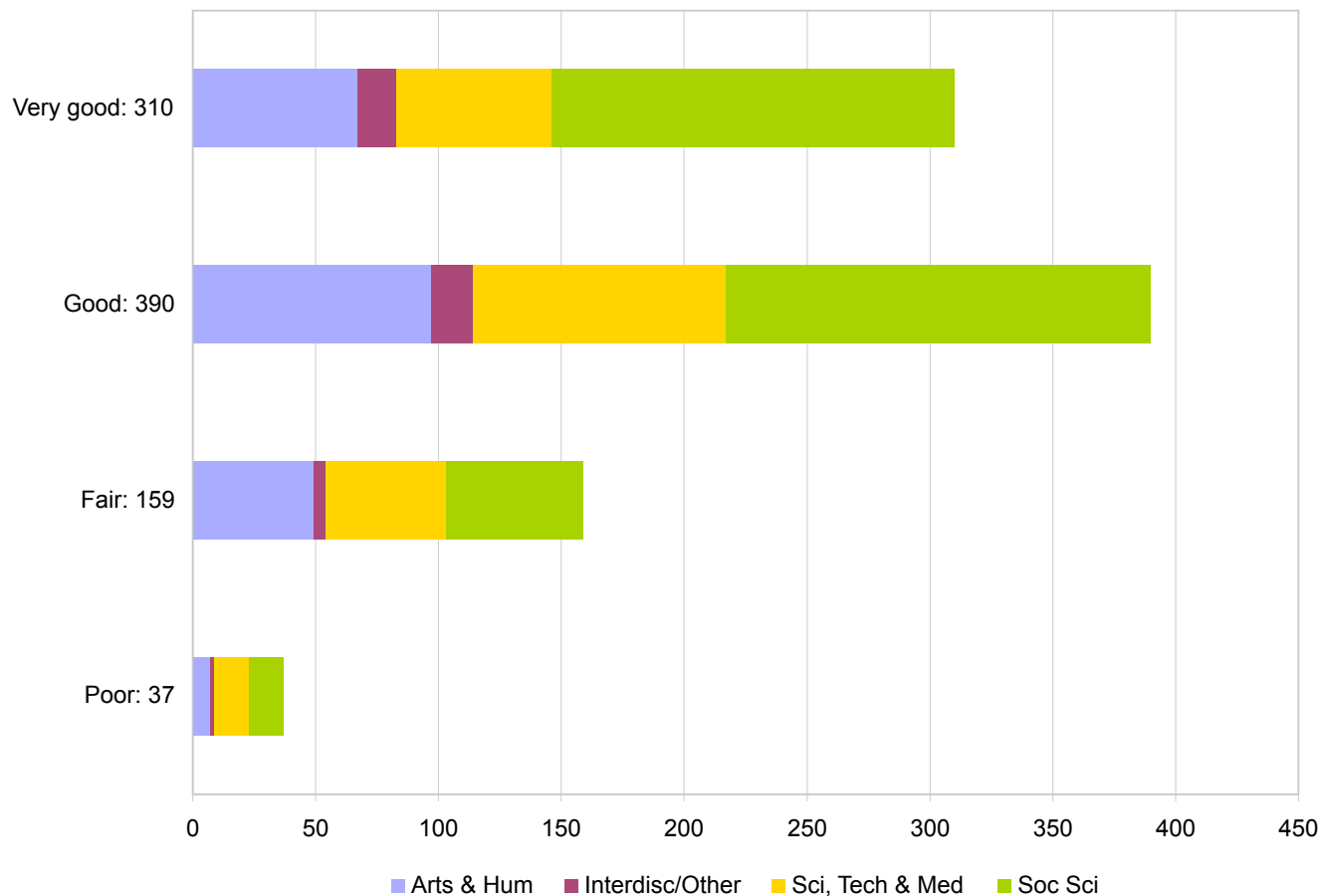
Number of respondents: 906.

9. How would you describe your level of computer literacy?



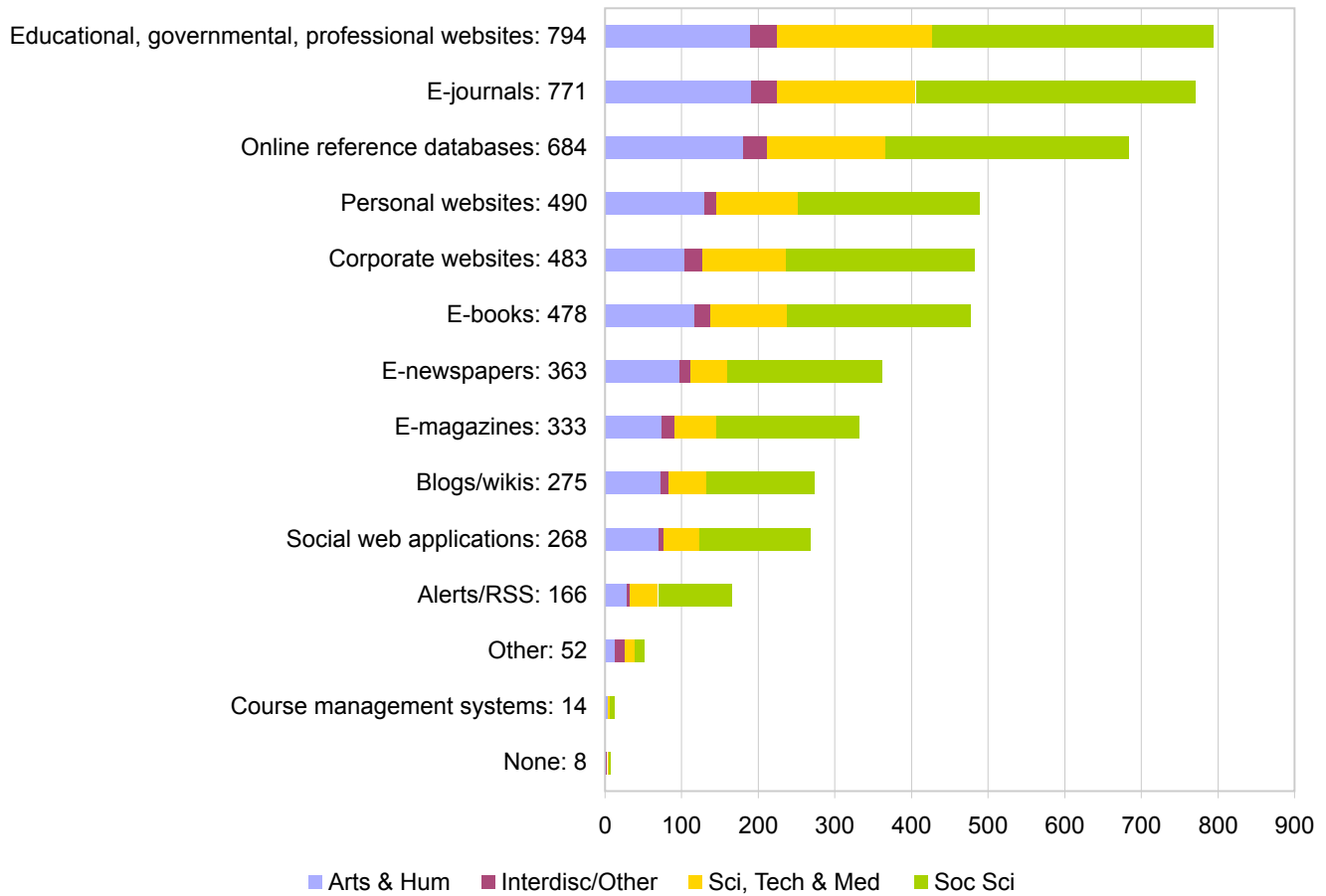
Number of respondents: 897.

10. How would you describe your level of awareness of electronic resources at your library?



Number of respondents: 896.

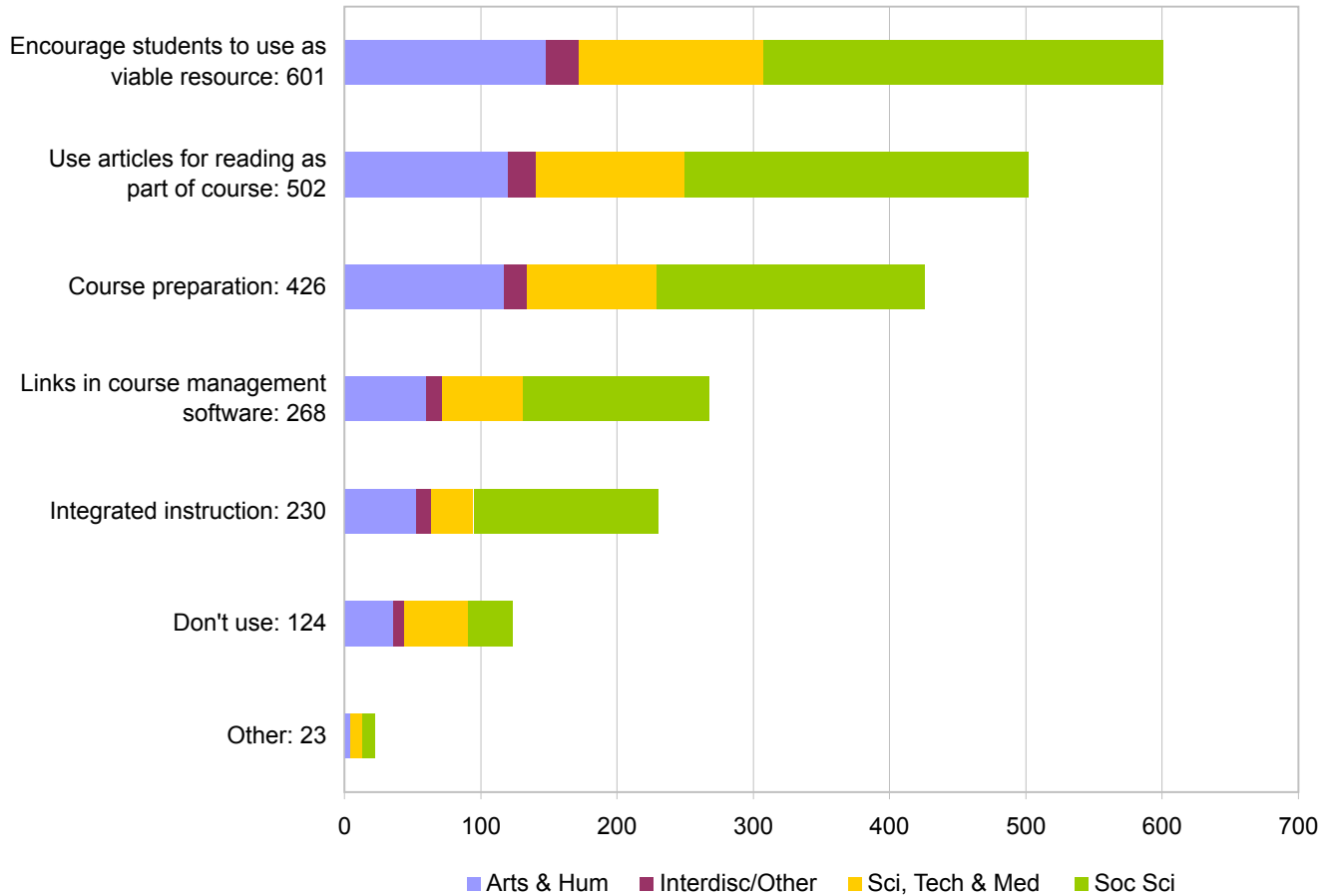
11. What types of electronic resources and tools do you currently use for your research, class preparation, or instruction?



Number of respondents: 895.

Respondents selected all items that apply.

12. How do you currently integrate the use of e-journals into your courses?



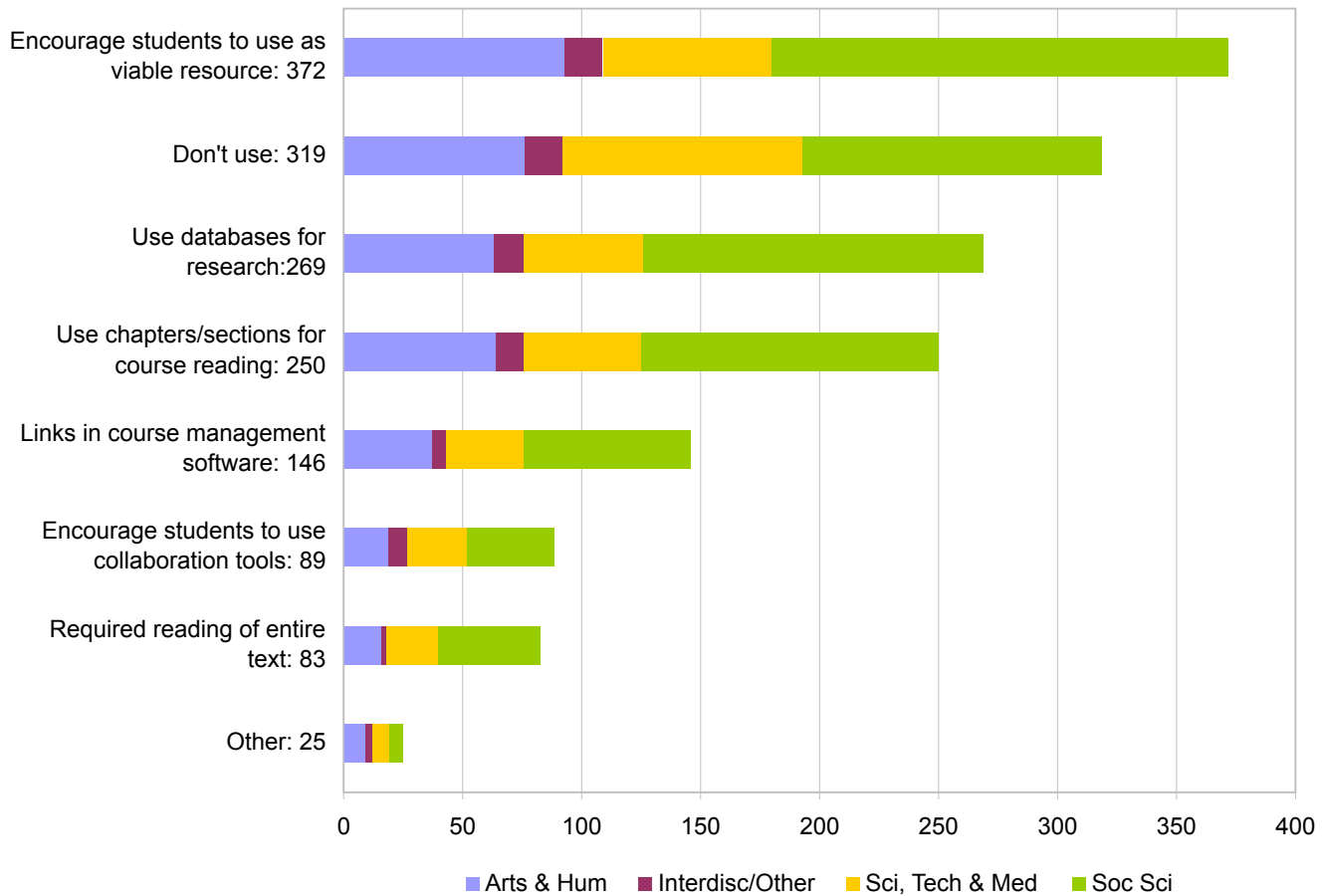
Number of respondents: 881.

Respondents selected all items that apply.

Reasons why respondents indicated they do not integrate the use of e-journals into their courses include the following:

- Difficult to read online.
- Students don't read material online.
- Difficult to use
- Not aware of resources and how to find them
- Use for research, but not teaching
- Not relevant to the subjects taught
- Undergrads not capable of reading journals

13. How do you currently integrate the use of e-books into your courses?



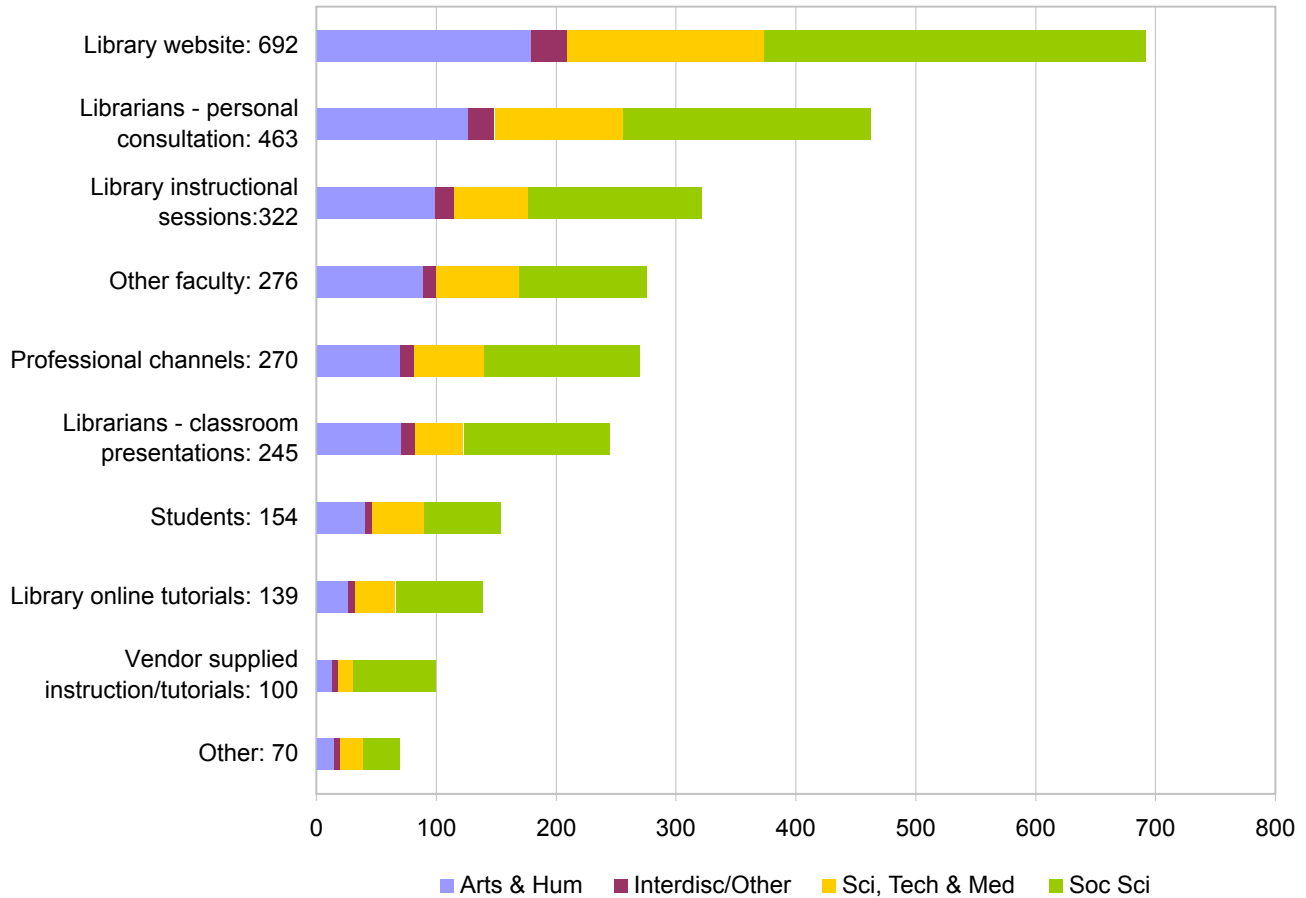
Number of respondents: 876.

Respondents selected all items that apply.

Reasons why respondents indicated they do not integrate the use of e-books into their courses include the following:

- Do not know if they're available
- Do not know how to find them
- Not relevant to subjects taught
- Difficult to read
- Difficult to use
- Students don't have easy access to computers.

14. How do you find out about electronic resources available through your library?



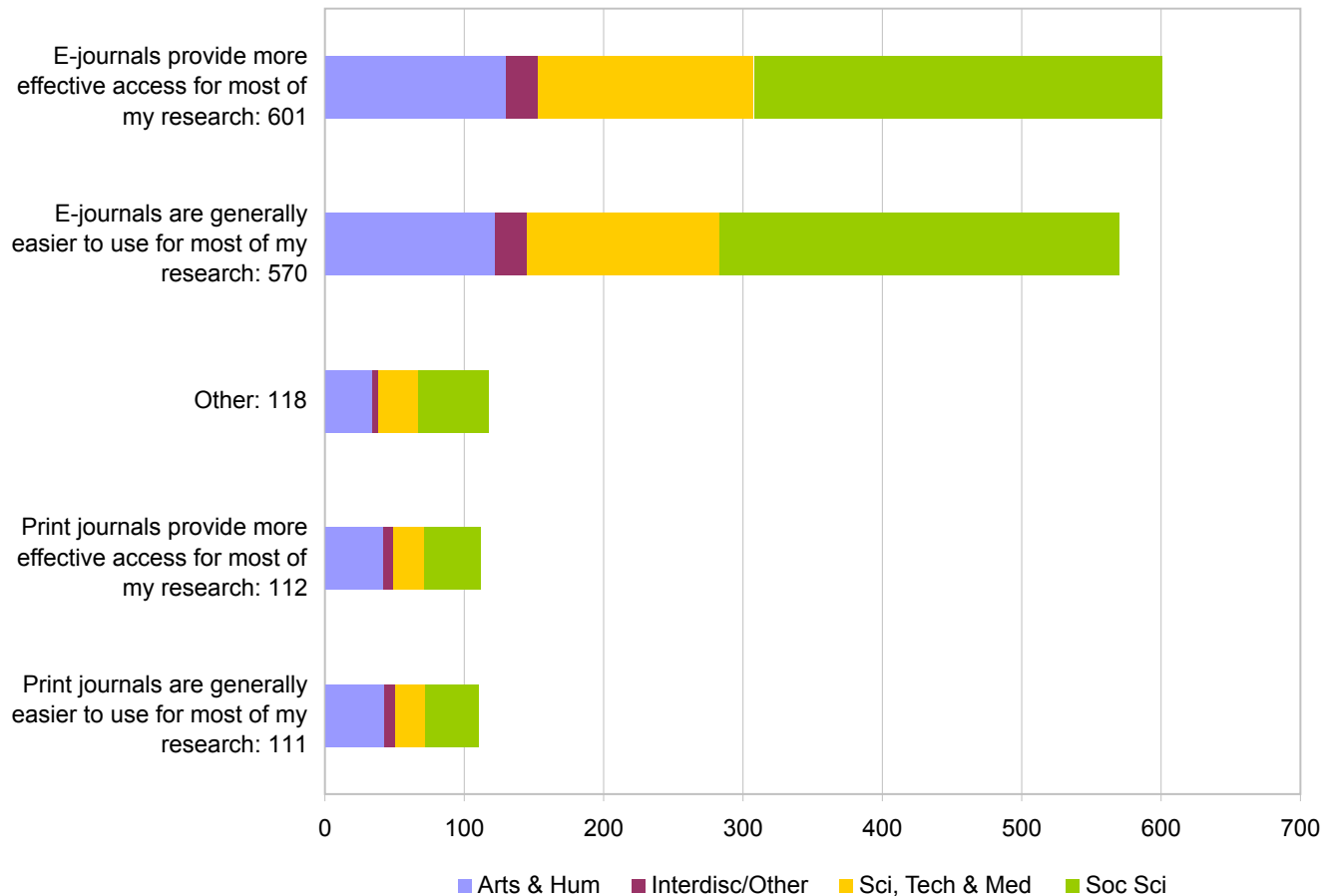
Number of respondents: 846.

Respondents selected all items that apply.

“Other” responses include the following:

- Email alerts from library
- Google (search and Scholar)
- Publisher notifications and websites
- Web searches

15. How would you characterize electronic access to journals as compared to print?



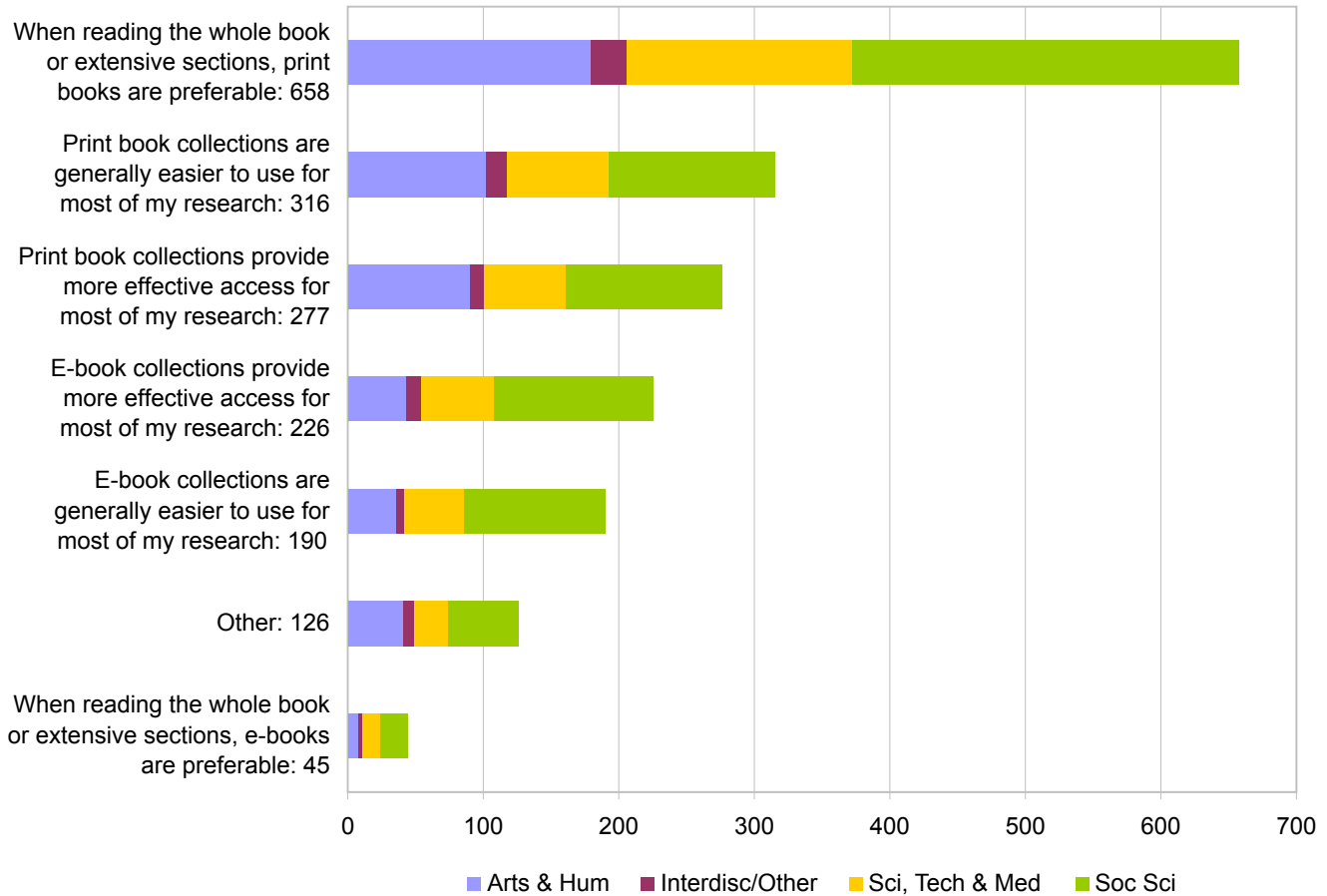
Number of respondents: 836.

Respondents selected all items that apply.

“Other” responses include the following:

- Both are valuable and equally important.
- It depends on the subject.
- Many e-journals do not include tables and graphs in the original text.
- Older works are not available online.
- E-journals are not as current.
- Not all journals are available online, few e-journals in my subject area.
- Print journals are easier to browse and read.
- E-journals are easier to find and use.
- E-journals are faster.
- E-journals provide greater access to more students.
- E-journals are not as stable. Publishers pull content.
- E-journals are only useful if you can download and print articles.
- E-journals would be more useful if you could highlight text.

16. How would you characterize electronic access to books as compared to print?



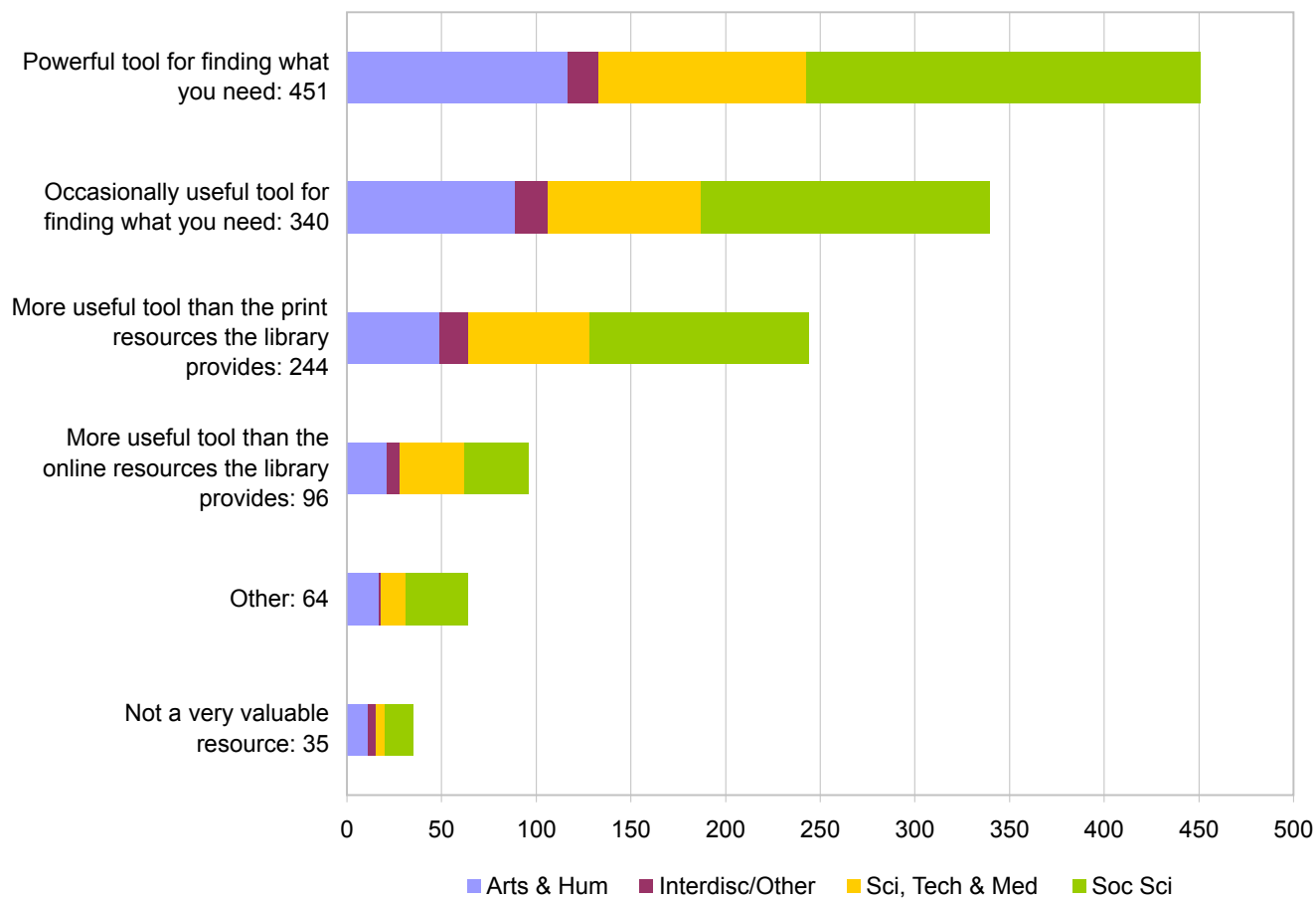
Number of respondents: 829.

Respondents selected all items that apply.

“Other” responses include the following:

- Both are valuable.
- It depends on the subject.
- E-books are better for research and quick reference, print books better for cover-to-cover reading.
- E-books are a good way to find and search books available in print.
- E-book collections don't have the breadth or depth of printed collections.
- E-books are easier to search.
- Print books are easier to read.
- It depends on the e-book functionality and interface.
- E-books can be accessed remotely.
- Print is more portable.
- Printed books are better for complex materials with statistics and graphics.
- There are too many technical restrictions on e-books (printing, number of users, etc.).

17. How would you characterize the value of search engines like Google when you are doing research or preparing instruction?



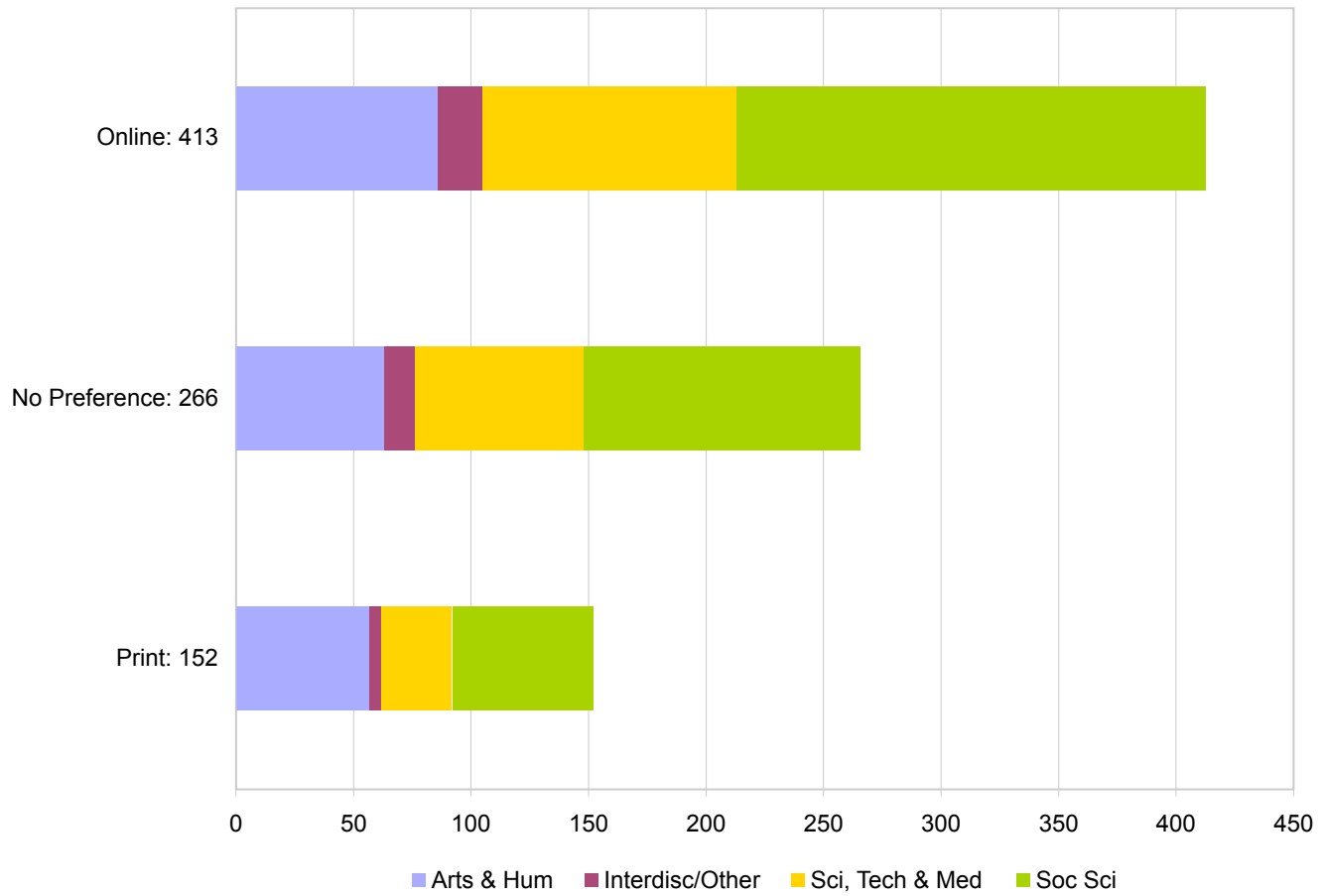
Number of respondents: 847.

Respondents selected all items that apply.

“Other” responses include the following:

- They are useful tools when used in conjunction with print and online resources the library provides.
- It depends on your ability and knowledge of how to search effectively.
- Usefulness depends on the type of research.
- They are good for pop culture and social networking, not as useful for peer reviewed resources.
- Google is not scholarly enough yet.
- Google is the easiest starting point for research.
- Results are not always authoritative.
- Google Scholar is not as comprehensive as the library’s database.
- Google Scholar is quick and easy for authors and citations but cannot lead to the library’s journal subscriptions.
- It’s not the format or tool that’s important, it’s the information.
- Information is more accessible, but not necessarily more reliable or better.
- They are powerful tools as long as you know what you’re looking for and can weed through the “junk.”
- They are powerful tools for searching and teaching (finding syllabi, others’ research, government agency resources, etc.).
- They are powerful tools, but don’t always find what you need.
- Results are often too broad and general.

18. Do you prefer using online resources or print for your research, class preparation, and instruction?



Number of respondents: 831.

(Continued on page 20)

Reasons why respondents indicated their preferences included the following:

Online

- Accessibility
- Availability
- Ability to access remotely
- More current information
- Online resources preferred by students
- Searchability
- Convenient/fast and easy
- Scope and depth is more thorough
- Reduces costs to students
- Saves on printing/ photocopying charges
- Better for distance learners
- Easier to use for instruction
- Easy storage of source information
- Ability to integrate with course management system
- Better functionality
- Can just print what you need, not the entire publication
- Can use electronic images
- Easier collation and comparison
- Durable links
- Ease of quotation
- Gives students the ability to expand their inquiries
- Prefer online, but need the ability to download and print
- Saves trees
- Linking capabilities
- Abstracts provided
- Necessary for visually impaired

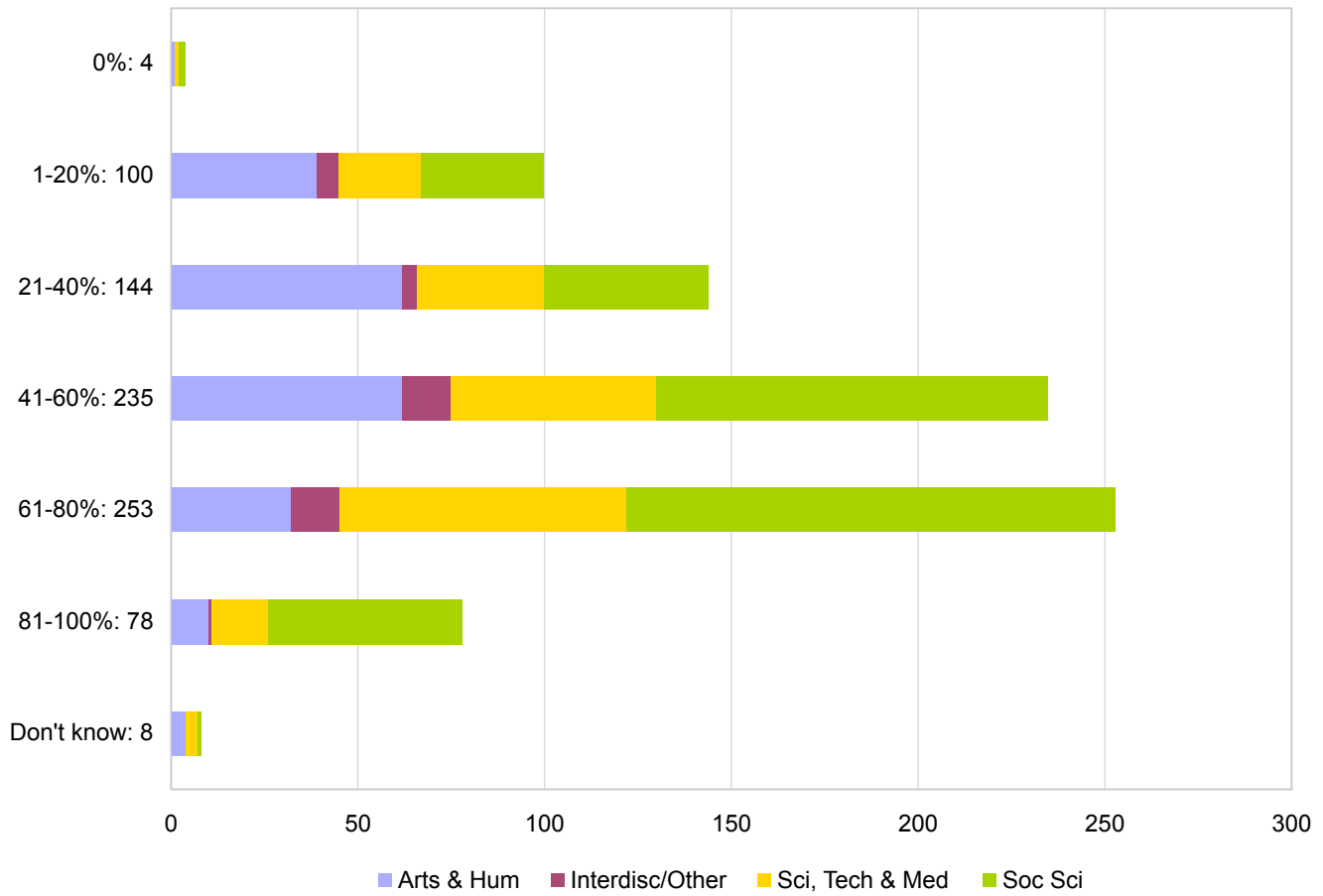
No preference:

- Use both
- Use both, depending on the task
- Print for research, online for teaching
- Online for journals, print for books
- Online for current data, print for older works not available electronically
- Depends on availability and accessibility
- Depends on the length. Print is better for longer materials.
- Depends on the source. Some are easier to use electronically, others in print.
- Depends on the subject taught. Some have more available electronic resources than others.
- Depends on the subject, available resources, and search interface
- Electronic resources are convenient, but browsing through print materials often renders information not found online.
- It's the information that matters, not the format.
- Online is faster, but the best sources are in print.
- Print is easier to read, but online is accessible to more students.
- Some print resources are unavailable online, and vice versa.
- Prefer to start with electronic, then use print

Print

- Easier to read and digest
- Easier to use
- Better portability
- Ability to annotate and highlight
- Easier to find
- Can have multiple resources open and visible at once
- Do not know how to use e-resources
- Unsure of validity of e-resources
- Easier to file, track and manage
- Ensures that materials are peer reviewed
- E-resources too slow to use at home
- Greater stability - unlikely to disappear
- Index easier to search than keyword searching
- Less plagiarism issues
- Many required materials only available in print
- More cost effective than e-books
- Research process is more personal
- No fees or membership required
- Print out e-materials anyway
- Students make better sense of printed materials: They read them more closely and take more notes.

19. Please estimate the percentage of information resources for research, class preparation, and instruction that you access electronically as compared to print



Number of respondents: 822.

20. What are the advantages and/or disadvantages of PRINT resources for your research or instruction?

Advantages of Print Resources

More Useable

Easy to read and digest	196
Portable	118
Ability to take notes, highlight	57
Tangible	14
Familiar	11
Multiple books open at once	8
<i>Number of times items indicated</i>	404

More Accessible

Easy to use	34
Easy to search, find and obtain	28
Easy to browse and find reference	23
No technical issues	20
Easy to access	11
Easy/better to store	7
No need to photocopy or print	6
Available	4
<i>Number of times items indicated</i>	133

More Reliable

Permanent - won't go away	25
Accurate graphics and charts	16
Durable	9
<i>Number of times items indicated</i>	50

Wider/better selection	49
-------------------------------	----

Disadvantages of Print Resources

Less Accessible

No remote access/harder to obtain	57
Limited access	49
Not always available	40
Limited selection	21
Interlibrary loans take too long	20
<i>Number of times items indicated</i>	187

Less Useable

Difficult to search and find	60
Quickly outdated	33
Cumbersome/bulky/heavy to carry	31
Hard to use with CMS*	12
Difficult to share	9
<i>Number of times items indicated</i>	145

More Expensive

Expensive	33
Require storage/physical space	30
Photocopying costs	11
<i>Number of times items indicated</i>	74

*course management system like Blackboard

Number of responses: 676.

This was a completely open-ended question.

21. What are the advantages and/or disadvantages of ELECTRONIC resources for your research or instruction?

Advantages of Electronic Resources

More Accessible

Any time, anywhere, immediate and convenient	315
More people can use at once	36
Better images	3
Necessary for visually impaired	2
<i>Number of times items indicated</i>	356

More Usable

Easy to search, find, browse, and retrieve	164
Easy to share/distribute/transport	42
Ability to manipulate text, images, etc./use in CMS	42
Ability to highlight, annotate, link, bookmark, etc.	30
Easy to print/download	29
Easy to archive/organize/reference	26
<i>Number of times items indicated</i>	333

Less Expensive

No storage/physical space required	26
Cost effective	26
Reduces printing/copying/better for environment	18
<i>Number of times items indicated</i>	70

Disadvantages of Electronic Resources

Less Usable

Difficult to read online	79
Not portable - need to be tethered to computer/internet	36
Too much information/not always authoritative	30
Difficult to highlight/annotate, copy/paste	12
Difficult to search, find, and retrieve	9
Difficult to use/various products are confusing	9
Need computer skills and training	9

Difficult to browse/scan	8
Have to download/difficult to download	8
Not tangible	7
Difficult to use multiple documents at once	4
Difficult to reference	4
Not flexible	2
<i>Number of times items indicated</i>	217

Less Accessible

Limited selection online	37
Not everyone has computers/connectivity	20
Copyright limitations/embargoes/printing restrictions	19
Not necessarily permanent	10
Students forget how to use the library	4
Access/authentication is cumbersome	3
<i>Number of times items indicated</i>	93

Less Reliable

Technical issues - depend on technology working	45
Poor quality of graphics and images	5
Not all documents complete/materials missing	5
Easier to plagiarize/cheat	3
<i>Number of times items indicated</i>	58

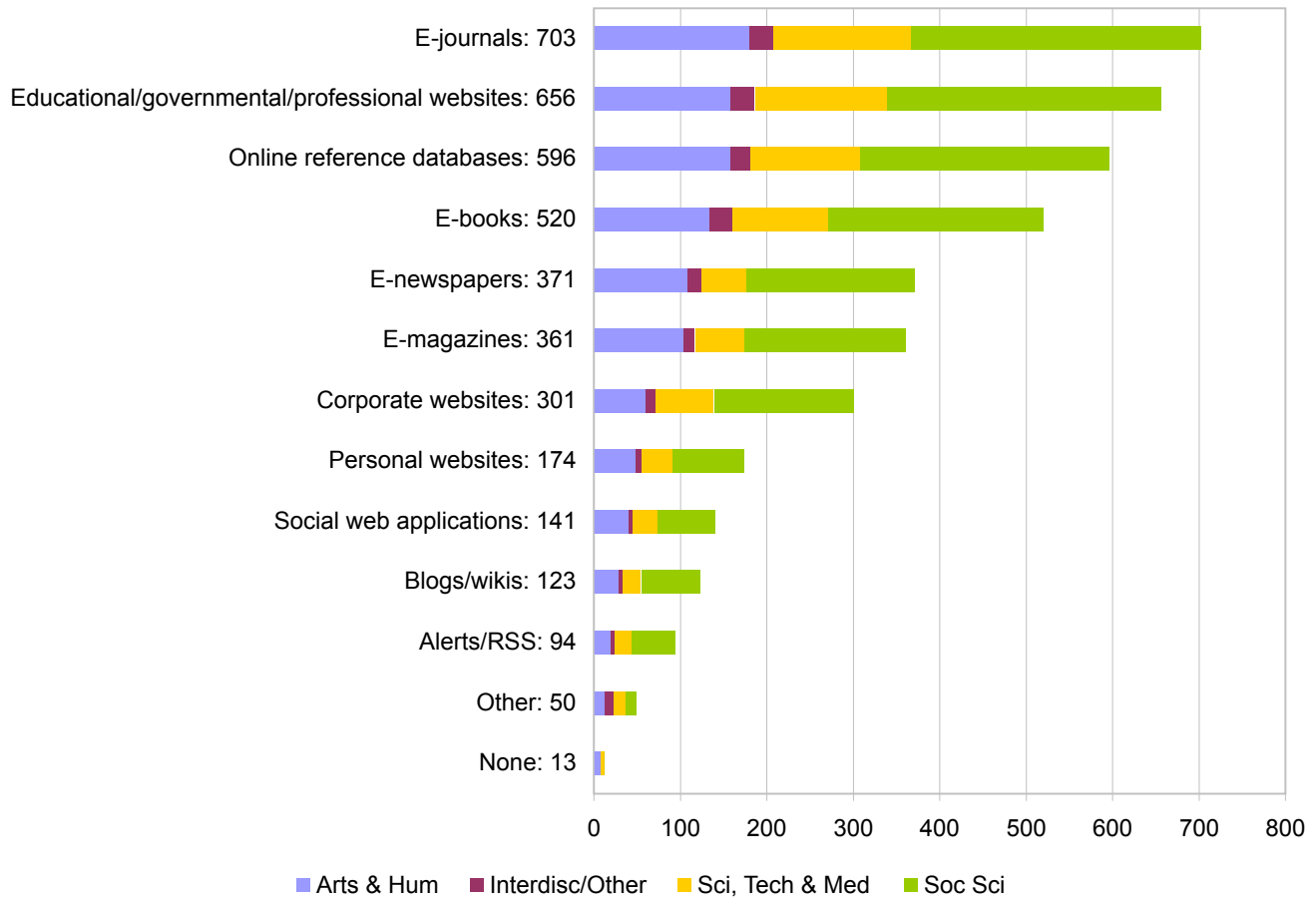
Costs

Need to print anyway/incur printing costs	29
Some resources expensive/some charge patrons	11
<i>Number of times items indicated</i>	40

Number of respondents: 686.

This was a completely open-ended question.

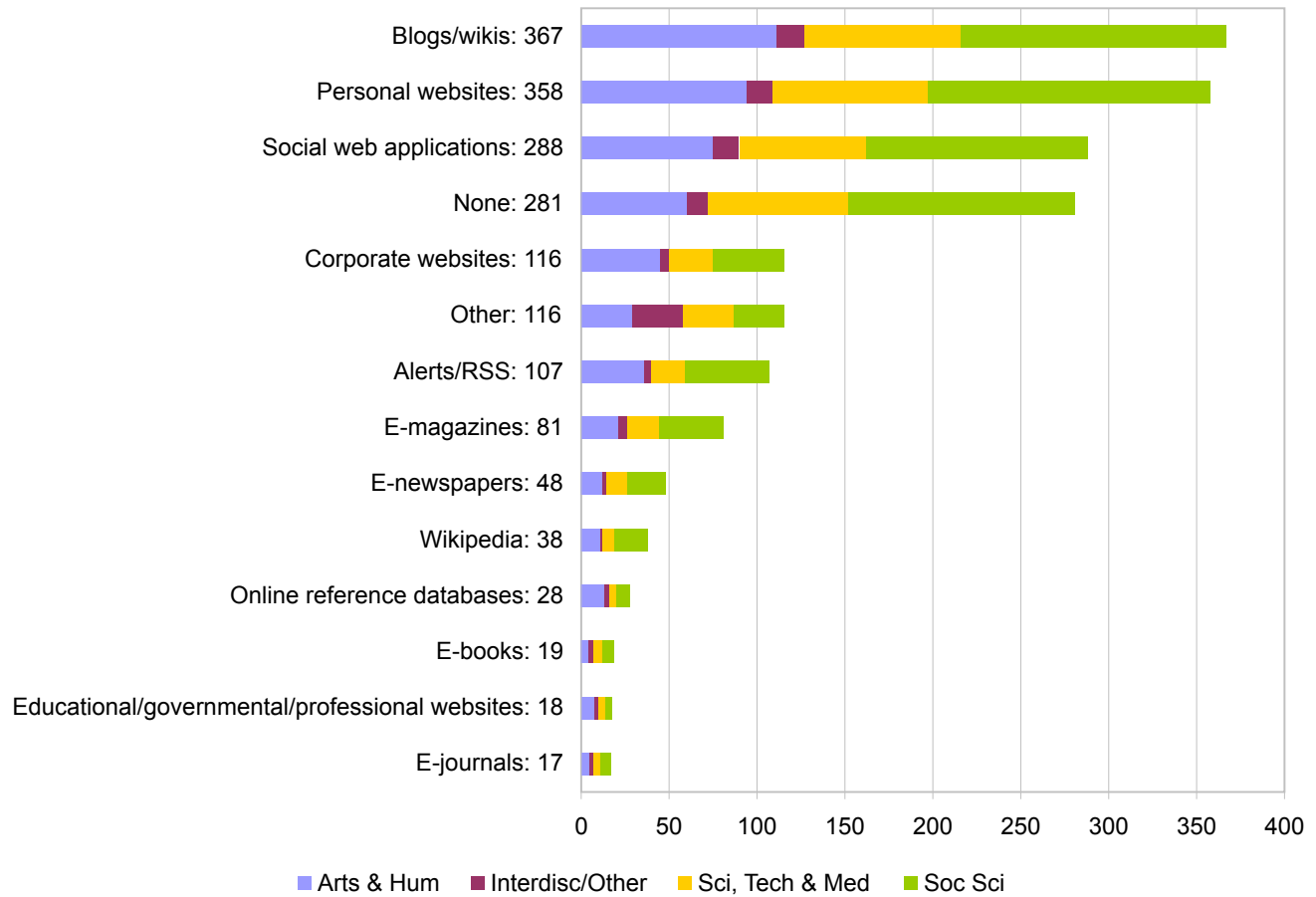
22. Which of the following online resources do you think are appropriate for use by your students for most of your assignments?



Number of respondents: 802.

Respondents selected all items that apply.

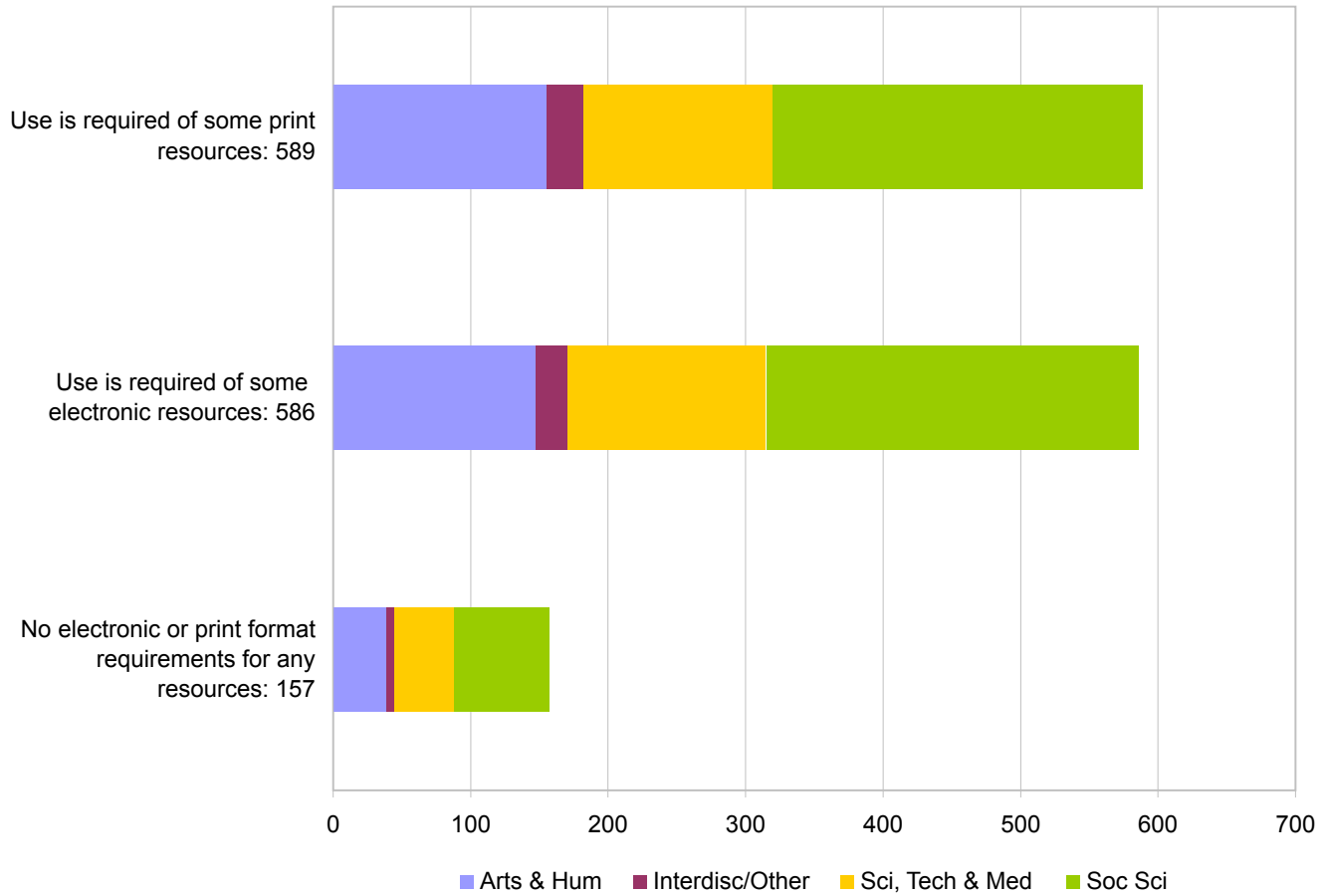
23. What types of electronic resources do you ask your students NOT to use for your assignments?



Number of respondents: 830.

Respondents selected all items that apply.

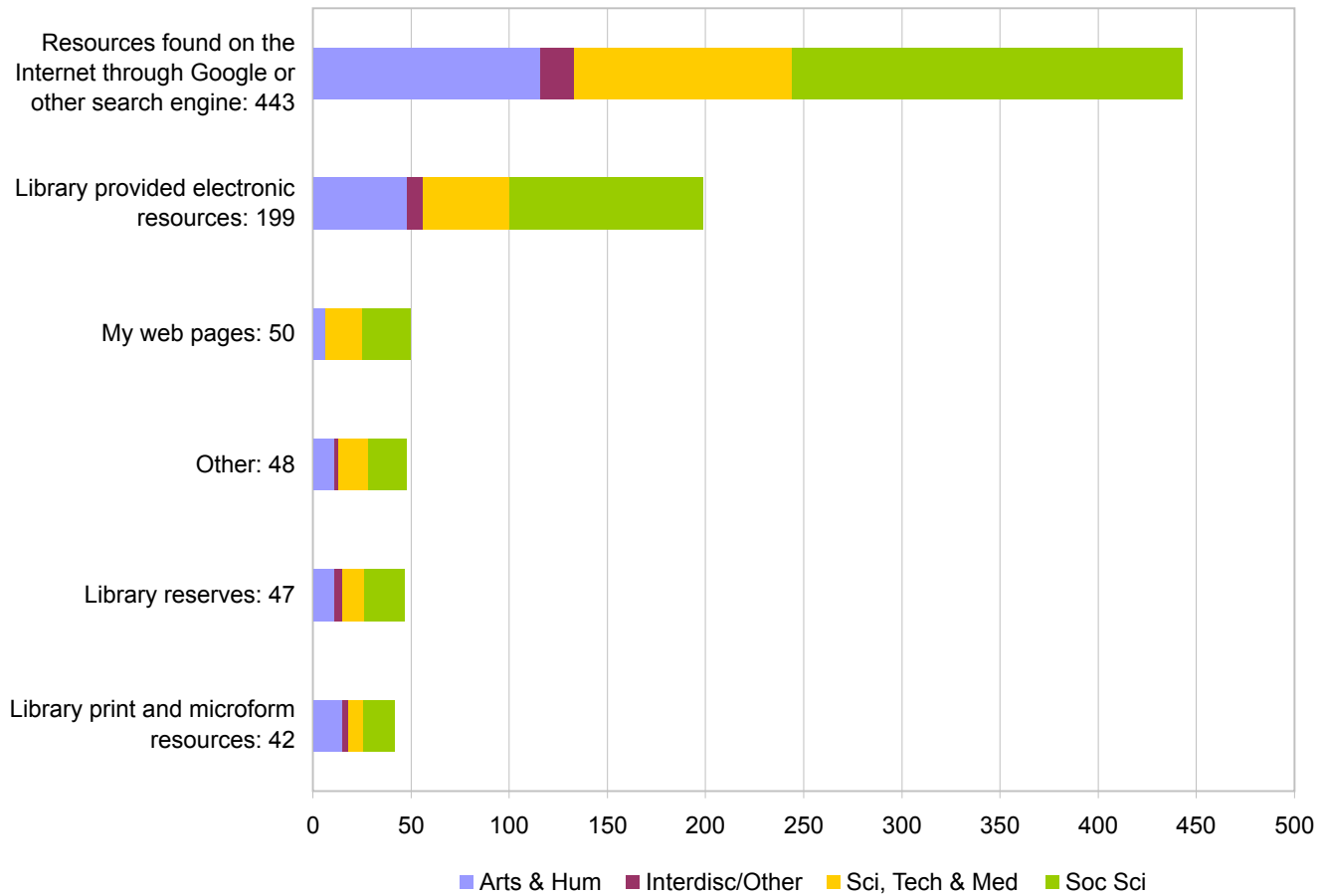
24. Are students required to use print or electronic resources for assignments in your courses?



Number of respondents: 830.

Respondents selected all items that apply.

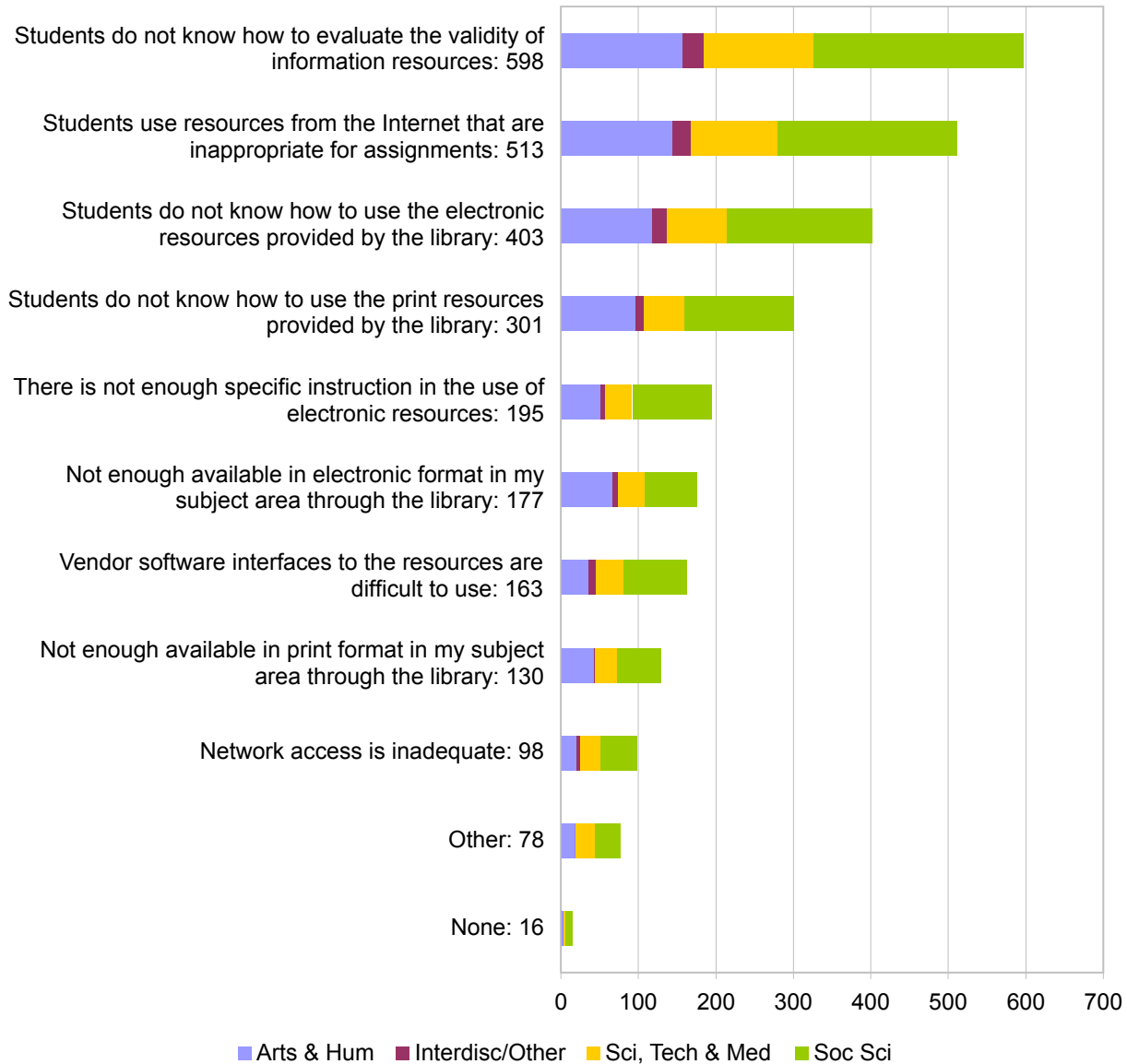
25. Where do you think students are accessing most of the information resources beyond the textbook and handout that they use for your assignments?



Number of respondents: 829.

Respondents selected one item.

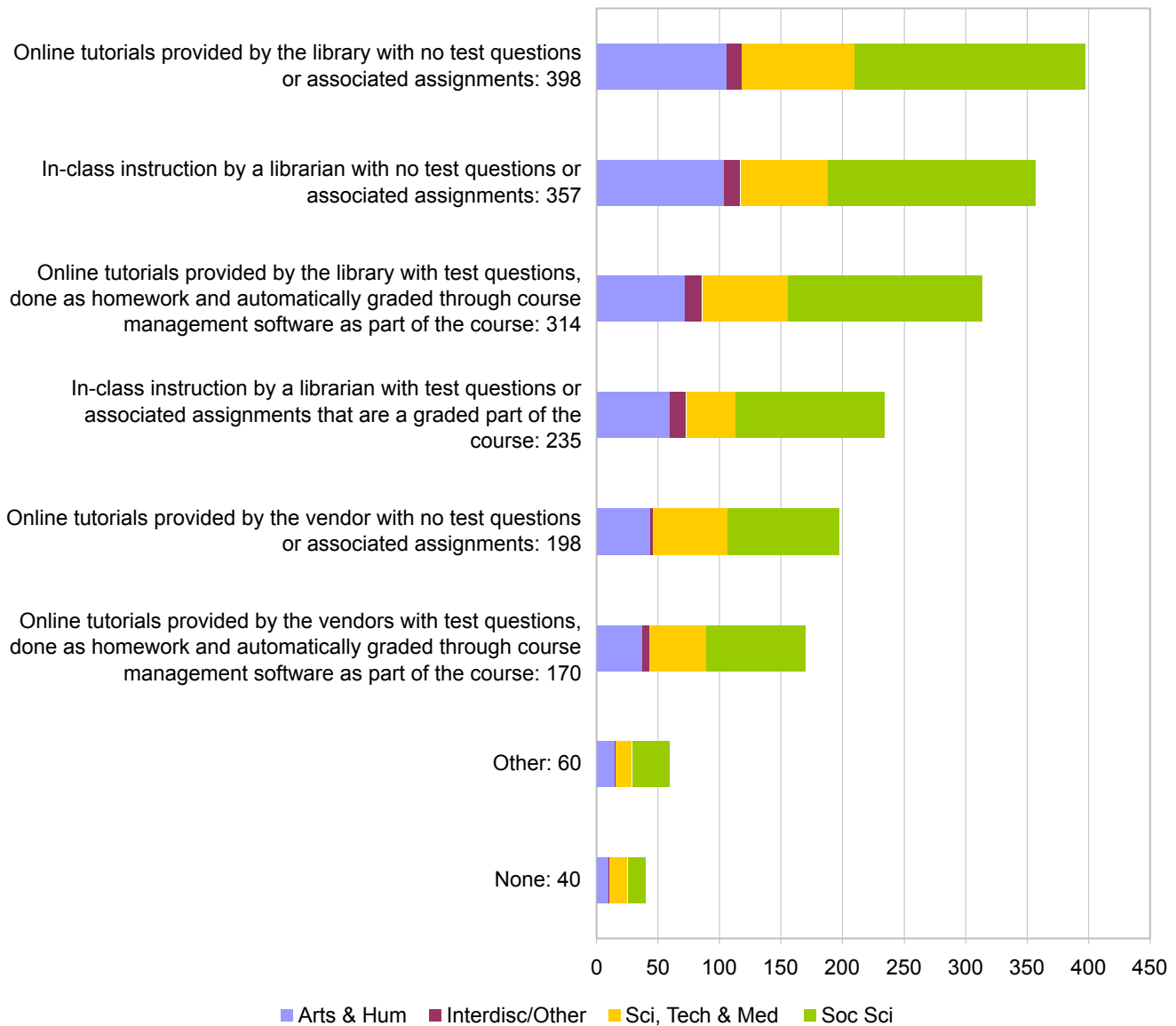
26. What are the difficulties associated with information resources?



Number of respondents: 703.

Respondents selected all items that apply.

27. Of the following instruction methods for information literacy, which would you be willing to have for your course?



Number of respondents: 692.

Respondents selected all items that apply.

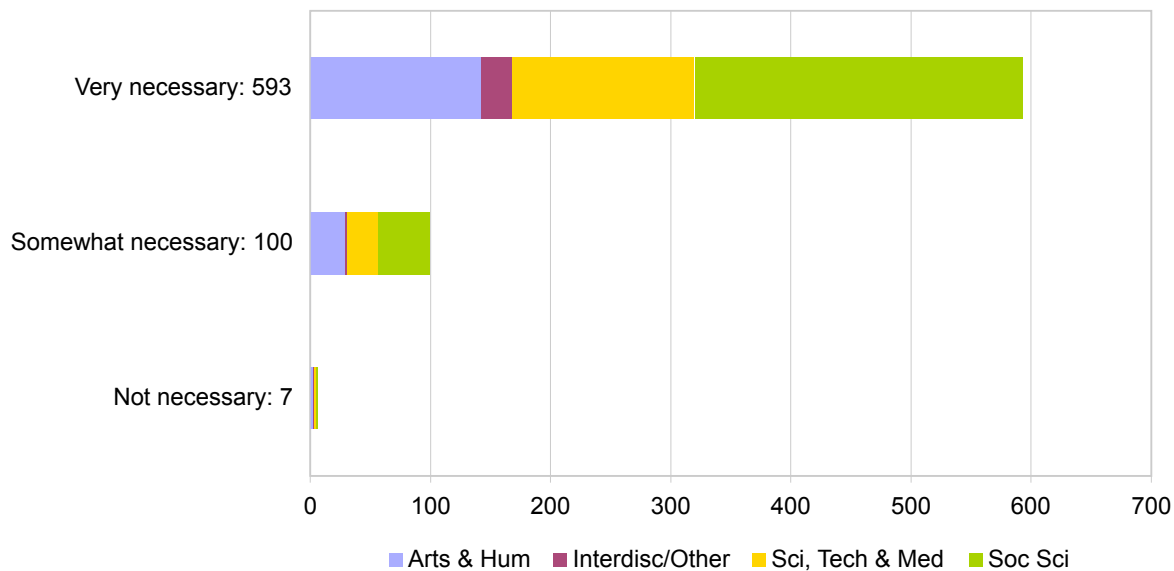
“Other” responses include the following:

- Information literacy taught as part of the course
- Depends on the course
- Mandatory instruction for undergraduate studies

(Continued on page 30)

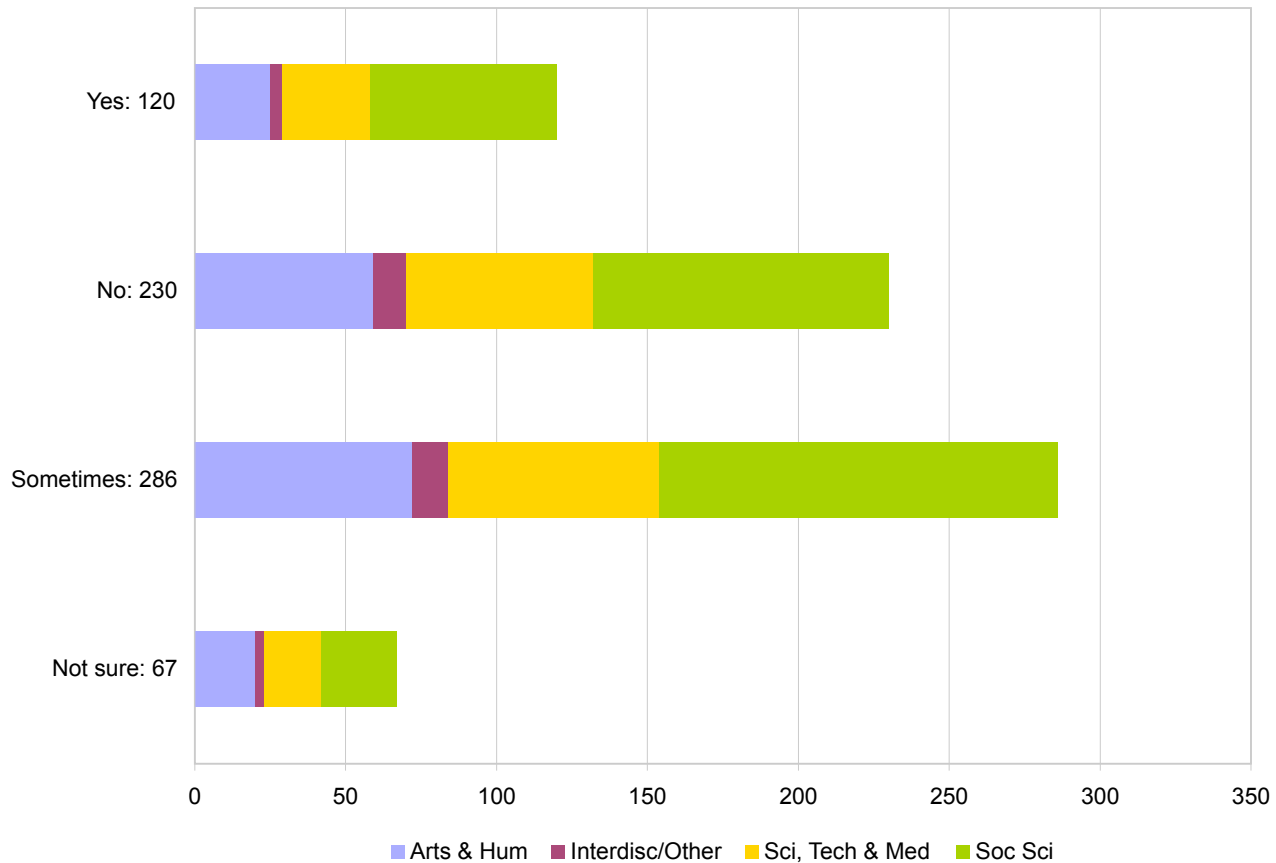
- “Rolling workshops” where people can sit in when it is convenient for them
- Assignments that require the use of electronic resources
- Expect students to have instruction before they take the class or get it on their own
- In-class instruction by a librarian with an option of test or no test
- Online tutorials provided by the library with test questions, but not graded for the course
- Online tutorials provided by the vendors that the library can modify or update as needed
- One-on-one instruction with a very knowledgeable librarian
- Printed materials so students can refer to the instructions while using the software

28. How necessary do you believe instruction in information literacy is to student research and learning?



Number of respondents: 700.

29. Do technical difficulties impede use of electronic resources at your institution?

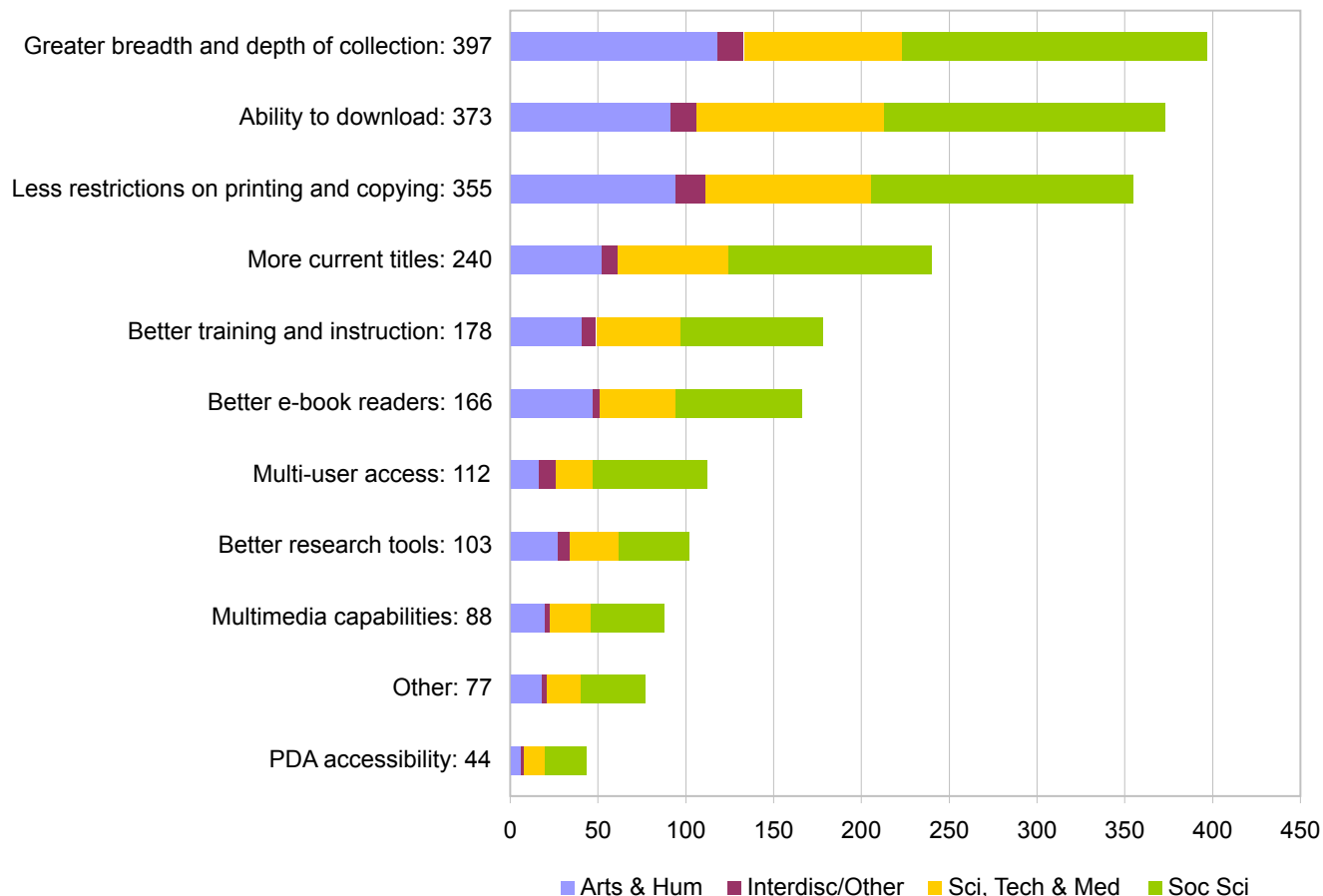


Number of respondents: 703.

Reasons for “yes” or “sometimes” include the following:

- Access and connectivity problems
- Network downtime
- Issues with course management software
- Not all students have computers
- Authentication issues
- Limited internet access
- Limited site license
- Bandwidth limitations
- Constant upgrading and maintenance issues
- Cost - students have to pay for internet access
- Difficulty logging in remotely
- Students forget passwords
- Remote access is confusing, with proxy servers, numerous passwords, etc.
- Difficulty downloading large files remotely
- Instability of vendor products
- Software compatibility issues
- Unreliable IT department
- Using vendor products (i.e., turning pages) is slow
- DRM restrictions

30. What do you feel would make e-book usage more suitable for use in your area?



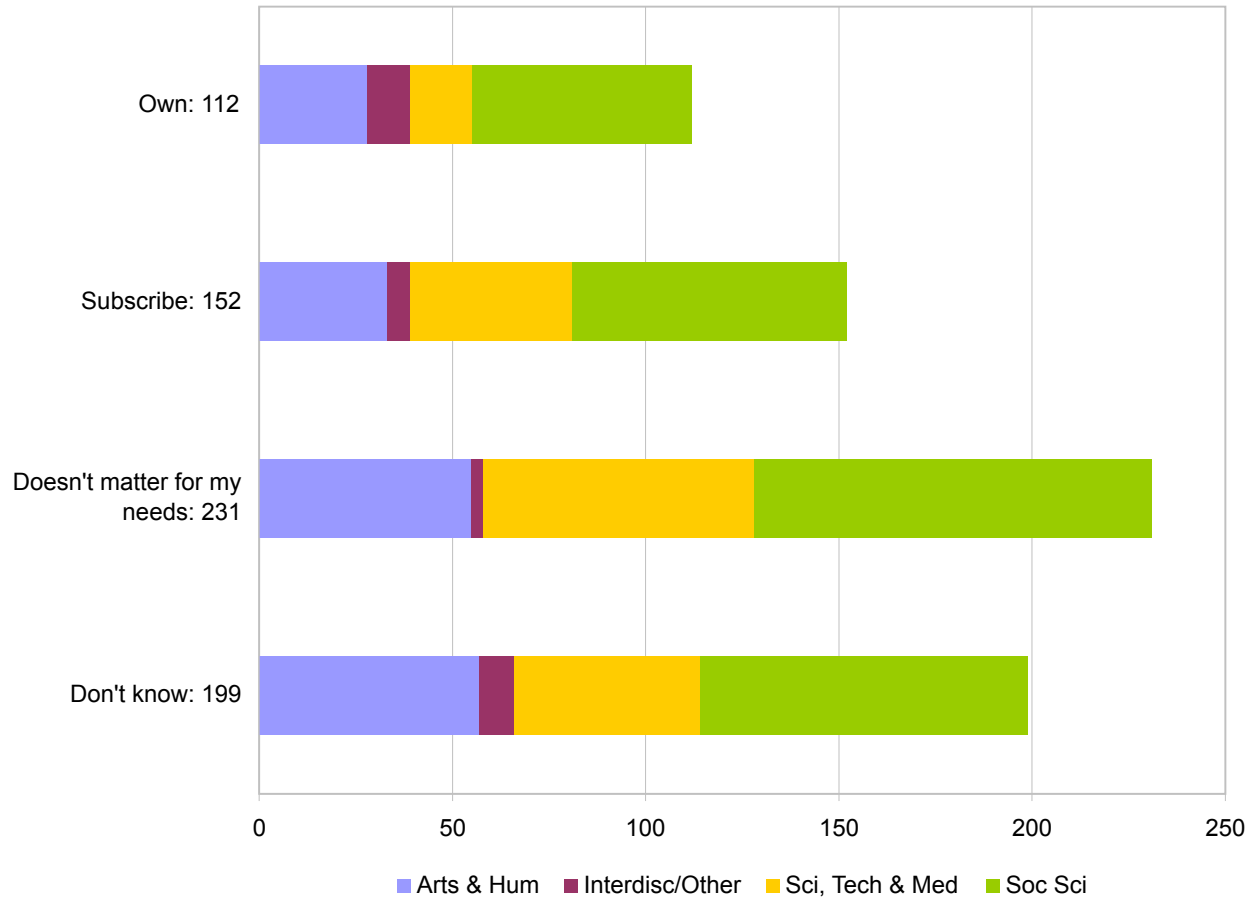
Number of respondents: 711.

Respondents selected their top three items.

“Other” responses include the following:

- Easier access/less bandwidth requirements
- No costs to students
- None - prefer print books
- Student interest
- Improved accessibility/server stability
- Linux compatibility
- More awareness and promotion of available resources
- Single platform and interface - too many vendor products are confusing
- Ability to annotate
- Available on iPod
- Better (book size) readers
- Browsible catalog
- Integration with OPAC

31. Would you prefer your library to own or subscribe to e-books and why?



Number of respondents: 694.

Reasons “why” include the following:

Own

- Permanence
- More stable than subscription
- No restrictions on printing or downloading
- Not affected by budget cuts
- Gives the library control over the materials
- Included in library catalog/can search in one place
- No recurring/rising costs associated with subscription
- Have been burned by subscription model for journals

(Continued on page 34)

Subscribe

- Greater flexibility
- More current materials/upgrades when new titles become available
- Access to more materials
- Available to more students
- Greater usage
- More cost effective

Does not matter for my needs

- Access is more important than the model.
- As long as there is pertinent content, the model doesn't matter.
- Depends on the nature of the materials and demand
- Multi-user access, less restrictions on printing and copying, ability to download, longer access time are more important.
- Whichever is more cost effective

I don't know

- Do not understand the advantages/disadvantages of owning or subscribing
- As long as materials are reliable and accessible, the model doesn't matter.
- Depends on the cost
- Depends on the longevity of titles
- Depends on the type of book
- Depends on what is available
- Depends on which students would use
- Do not use e-books
- Prefer library to own print books, subscribe to journals
- Prefer print materials
- Prefer to own core materials, lease materials that go out of date quickly

Related Papers

SURVEY ANALYSIS BY ALLEN MCKIEL, DIRECTOR OF LIBRARIES, NORTHEASTERN STATE UNIVERSITY

INTRODUCTION

This article reviews the responses from the survey that ebrary concluded in late October of this year concerning faculty experience with information resources. The questions evolved from an initial survey of approximately 200 academic librarians that ebrary conducted to gather thoughts on what the survey should cover. Very broadly the survey examines faculty usage of electronic and print resources for research and instruction, their attitudes about information resources, perceived strengths and weaknesses of various resources, and experiences and preferences for information literacy instruction.

OVERVIEW OF SURVEY RESPONDENTS

The survey includes responses from 906 members of the faculty of higher education institutions from 38 countries. Tables in the results section provide a Carnegie Classification breakdown for US institutions, a breakdown of participants by broad subject discipline, self-reporting of online course experience, years of experience in higher education, self-reporting of computer skills, and self-reporting of information literacy skills. Due to the timeframe for publication of this review, no attempt has been made to analyze the responses by the categories of respondents. The respondent demographics were collected in questions 1 through 10. The questions concerning the focus of the survey begin with question 11.

COMMENTARY

11. What types of electronic resources and tools do you currently use for your research, class preparation, or instruction?

Educational, governmental, and professional web sites ranked first in the number of faculty (89%) who indicated that they used them for research, class preparation, or instruction. This is noteworthy because it demonstrates the sea of change the Internet has facilitated in scholarly communication. These websites are the new phenomenon in the academic neighborhood and they are already competing for the position

as the primary source of information for research, class preparation, or instruction. The responses to question 18 concerning the preference for online versus print resources demonstrated a preference for online (50%) over print (18%). Refereed e-journals ranked a close second with 86%. Just over 76% of the faculty surveyed selected online reference databases like encyclopedias, Statistical Abstracts, and Business Dateline. E-books had a fairly poor showing. It ranked down with personal and corporate websites at about 54%. This response rate coincides with the responses of the librarians in ebrary's March 2007 survey concerning usage of e-books in general. Forty-one percent found usage good to excellent while 59% found it fair to poor.

In the article that accompanied the publication by ebrary of the March 2007 survey results, I provided an explanation of the low e-book usage compared to print. Patrons compare e-books unfavorably to print books for ease-of-use and portability. Most patrons know how to retrieve a book from the shelf once they find it in the catalog. They do not as frequently know how to effectively use vendor e-book interfaces. And most people would prefer to read a print version of a book over an electronic version on a computer screen. I also indicated that, in my experience with patrons who learn how to use the vendor interfaces and become aware of the strengths of e-book collections (i.e. full-text keyword searching, 24/7 availability, currency, and text handling tools), they prefer them when doing research. To this I would add another significant reason for low usage. The e-book collection has to be of a significant volume compared to the print collection for it to be worth mining for information.

For example, when a small business and education college with a collection of 40,000 mostly out-of-date print titles subscribes to an e-book collection of 30,000 mostly current titles, the e-book collection may be by far the better collection for most of the institution's student and faculty information needs. For a university with a million print titles, much of which has been specifically selected for the nuances of a more complicated set of research needs, the 30,000-title collection will be a significant addition to the collection but it will not command the same respect.

My solution to the e-book usage problem is for publishers and vendors to provide libraries with access to very large collections along with powerful text handling tools and download capability to e-book readers like the new offering from Sony. Charging libraries for what faculty and students use could be more egalitarian with respect to the vagaries and disparities of the diverse institutional budgets and would promote use. And the library budgets would be driven more directly by the research needs of faculty and students. Practical limits that would allow libraries to stay within budgets could be arranged through management of accounts. The way some libraries handle print limits is an example. A print server can manage student accounts through login identification. Page limits of library provided printing can be set for a semester. Graduate students or faculties could have different limits. When the limit is reached, the patron is responsible for purchasing additional printing. In a similar manner, a library could facilitate access to significant e-book collections that would otherwise be beyond its means.

12. How do you currently integrate the use of e-journals into your courses?

13. How do you currently integrate the use of e-books into your courses?

Questions 12 and 13 were designed to compare e-journal and e-book usage. E-journals are used more often by faculty across the board—a total of 2,056 affirmative responses for e-journals and 1,241 for e-books. Approximately 14% of the respondents indicated that they do not integrate use of e-journals into their courses and 36% of respondents do not use e-books for their courses. Integration of the use of e-books into teaching clearly lags behind e-journal usage. Nevertheless, the responses demonstrate that e-book and e-journal issues are very much the same.

The following are typical of concerns articulated in the comments of the open-ended responses concerning e-books:

- Do not know if they're available
- Do not know how to find them
- Not relevant to subjects taught
- Difficult to read
- Difficult to use
- Students don't have easy access to computers

The following are the open-ended responses concerning e-journals:

- Difficult to read online
- Students don't read material online
- Difficult to use
- Not aware of resources and how to find them
- Use for research, but not teaching
- Not relevant to the subjects taught
- Undergrads not capable of reading journals

Usage of e-books and e-journals by faculty in their courses is also very similar. They are both used for student research associated with the course, as assigned readings, and for faculty research and course preparation. The largest number of faculty responses for both e-journals and e-books was an affirmation of their practice of encouraging students to use e-journals and e-books for their research—68% and 43% respectively. The second most frequent selection for e-journals and the third for e-books were for faculty use as required course readings—e-journals at 57% and e-books at 29%. The second most frequent selection for e-books and the third for e-journals were for use by faculty in research or course preparation—e-journals 48% and e-books 31%.

14. How do you find out about electronic resources available through your library?

The primary source of information for faculty about library resources is the library website as attested by 81% of respondents to this question. The distant second is through personal consultation with librarians—55%. The third is through library instruction sessions—38%. Other faculty, professional and subject area resources, and librarian classroom presentations nearly tie for fourth with 33%, 32%, and 29% respectively. Online library tutorials (16%) and vendor tutorials (12%) constitute the remainder. Worth mentioning is the 26 out of 70 open-ended comments that reported learning about electronic resources through email notices from the library.

The results suggest the conundrum of current academic librarianship—the difficulty of providing comprehensive instruction. Faculty most often find out about library resources through the information provided on the library website. They are not being introduced to new resources comprehensively through instruction, which includes the nuances of vendor interfaces like those associated with e-books, e-journals, and reference databases.

Instruction in the effective use of online resources would likely improve usage significantly. E-journal and e-book usage, usage of reference databases like Business Dateline, and use of general search engines like Google would become more appropriate and effective with instruction. However, providing comprehensive instruction in the growing arena of topics becoming essential for information literacy can not be accomplished using conventional methods of information literacy instruction for faculty or students. There are not enough librarians even if information literacy were accorded a place in general education requirements. Comprehensive information literacy instruction is becoming the central challenge for academic librarianship.

15. How would you characterize electronic access to journals as compared to print?

16. How would you characterize electronic access to books as compared to print?

Questions 15 and 16 were meant to be compared. The blatantly obvious difference between e-journals and e-books is that e-journals are viewed more favorably than e-books when compared to print. E-journals are seen as providing more effective access for research (72% of responses) and they are seen as easier to use (68%) than print journals. Print books are seen as preferable to e-books for reading the entire work (79% of responses). Print books are seen as more effective for research (33% print and 27% e-books). And print is seen as easier to use for research (38% to 23%).

It is likely that effectiveness is to a large extent a factor of the breadth and depth of the collection. The responses to question 30 indicate that greater depth and breath would be the most effective way to improve e-book collections. E-journal collections commonly outstrip print collections in academic libraries. This likely contributes to the positive responses they receive compared to print. Print book collections commonly surpass e-book collections, which in turn likely contribute to the preference for p-books over e-books. Until e-book collections compete favorably in breath and depth with print collections, they will not be taken as seriously as e-journal databases. The message for publishers and vendors is to provide access to larger collections.

For ease of use, e-books are seen negatively compared to print in two perspectives. First, e-books are compared unfavorably to print for reading the whole work. This will be true until there are universally available e-book readers that are preferable to the comfortable and much loved codex form of the book. Second, it is likely in my view that research using e-books is negatively compared to print because the primary method of access is the library catalog, not the vendor interface. The

strength of e-books for research becomes apparent through familiarity with the interface tools. More students and faculty already know to use vendor interfaces for e-journals. They do not try to find e-journal articles through the library catalog. They use the vendor interfaces.

The following are samples of the open-ended comments that respondents contributed concerning their characterization of e-journals and e-books as compared to print. They are roughly supportive of the patterns of responses in the selection of responses that were provided; however, they demonstrate the broad range of individual experience with e-journals and e-books.

E-journals vs. P-journals

- Both are valuable and equally important
- Depends on the subject
- Many e-journals do not include tables and graphs in the original text
- Older works are not available online
- E-journals are not as current
- Not all journals are available online, few e-journals in my subject area
- Print journals are easier to browse and read
- E-journals are easier to find and use
- E-journals are faster
- E-journals provide greater access to more students
- E-journals are not as stable. Publishers pull content
- E-journals are only useful if you can download and print articles
- E-journals would be more useful if you could highlight text

E-books vs. P-books

- Both are valuable
- Depends on the subject
- E-books are better for research and quick reference, print books better for cover-to cover reading
- E-books are a good way to find and search books available in print.
- E-book collections don't have the breadth or depth of printed collections
- E-book are easier to search
- Print books are easier to read
- Depends on the e-book functionality and interface
- E-books can be accessed remotely
- Print is more portable
- Printed books are better for complex materials with statistics and graphics
- There are too many technical restrictions on e-books (printing, number of users, etc.)

17. How would you characterize the value of search engines like Google when you are doing research or preparing instruction?

The most popular selection (53% of the respondents) characterized search engines like Google as a “powerful tool for finding what you need” for doing research or preparing instruction. With 40% of the respondents, “occasionally useful tool” was the second most popular selection. Only 4% indicated that they thought it was not a very valuable resource.

Nearly 29% of the respondents to this question thought that Google was a more useful tool than the print resources of the library for research and instruction. Just over 11% thought that Google was more useful than the online resources provided by the library. If the converse is valid, the library, particularly its provision of online resources, is viewed by the majority of faculty in this survey as a more useful tool than search engines like Google for accessing information resources relevant to doing research or preparing instruction. This may be comforting to librarians. However, a level of ambiguity is added when viewing these responses in the context of the responses to Question 11. The highest percentage of respondents (89%) selected educational, governmental, and professional web sites as the electronic resource they used for research, class preparation, or instruction. Web sites are not necessarily provided through either the library or search engines. They may be accessed by following links.

The following comments, provided by the 7% that responded to ‘other (please explain),’ offer a sampling of individual perspectives on the value of search engines like Google.

- Useful tool when used in conjunction with print and online resources the library provides
- Depends on your ability and knowledge of how to search effectively
- Usefulness depends on the type of research
- Google is not scholarly enough yet.
- Google is the easiest starting point for research
- Results are not always authoritative
- Google Scholar is not as comprehensive as the library’s database
- More accessible, but not necessarily more reliable or better
- Powerful tool as long as you know what you’re looking for and can wade through the “junk”
- Powerful tool for searching and teaching (finding syllabi, others’ research, government agency resources, etc.)

18. Do you prefer using online resources or print for your research, class preparation, and instruction?

Just fewer than 50% prefer online, 18% prefer print, and 32% have no preference. The clear preference for online resources by nearly half of the respondents is associated with particular information needs, experiences, and skills as well as the varying availability of the online and print mix of resources at their respective libraries. The following selection of responses from the 387 who included comments provides some detail for the varied experiences that comprise the preferences. The comments are listed by the preference—online, print, or no preference.

Online—50%

- Accessibility
- Availability
- Ability to access remotely
- More current information
- Students prefer online resources
- Search ability
- Convenient/fast and easy
- Scope and depth is more thorough
- Reduces costs to students
- Saves on printing/photocopying charges
- Better for distance learners
- Easier to use for instruction
- Easy storage of source information
- Ability to integrate with course management system
- Better functionality
- Can just print what you need, not the entire publication
- Can use electronic images
- Easier collation and comparison
- Durable links
- Ease of quotation
- Gives students the ability to expand their inquiries
- Saves trees
- Abstracts provided
- Necessary for visually impaired

No Preference—32%

- Use both, depending on the task
- Print for research, online for teaching
- Online for journals, print for books
- Online for current data, print for older works not available electronically
- Depends on availability and accessibility
- Depends on the length. Print is better for longer materials
- Depends on the source. Some are easier to use electronically, others in print
- Depends on the subject taught. Some have more available electronic resources than others.
- Depends on the subject, available resources, and search interface
- Electronic resources are convenient, but browsing through print materials often renders information not found online
- It's the information that matters, not the format
- Online is faster, but the best sources are in print
- Print is easier to read, but online is accessible to more students
- Some print resources are unavailable online, and vice versa
- Prefer to start with electronic, then use print

Print—18%

- Easier to read and digest
- Easier to use
- Better portability
- Ability to annotate and highlight
- Can have multiple resources open and visible at once
- Do not know how to use e-resources
- Unsure of validity of e-resources
- Easier to file, track and manage
- Ensures that materials are peer reviewed
- E-resources too slow to use at home
- Greater stability - unlikely to disappear
- Less plagiarism issues
- Many required materials are only available in print
- The research process is more personal
- Print out e-materials anyway
- Students make better sense of printed materials: They read them more closely and take more notes

19. Please estimate the percentage of information resources for research, class preparation, and instruction that you access electronically as compared to print.

Estimated usage of resources skews to the electronic side. Just over 40% of the respondents use electronic more than 60% of the time. About 30% use electronic resources less than 41% of the time. And about 30% of the respondents indicated that they use electronic and print resources in about equal measure (between 41% and 60% of the time).

20. What are the advantages and/or disadvantages of PRINT resources for your research or instruction?

Evaluating the relative advantages and disadvantages of print versus electronic resources depends on the particular resource (i.e. e-journals, e-books, or a particular vendor interface), the particular need or use (i.e. reading, reference, research), and the user's skill level with the various tools (i.e. library collection or particular vendor software interfaces). It also depends on the breadth and depth of the particular collections that are being compared. This survey catches a snapshot of faculty evaluations given the collections that they have available, their resource needs, and their skill sets. As these variables change over time, the responses will also change. With that as a caveat, I have grouped the responses in broad categories (usability, accessibility, reliability, and cost) to get some perspective on the detail.

Advantages of Print Resources

The primary advantage of print resources is their usability, which garnered 404 of the 636 comments. They were reported as easier to read in 196 responses and more portable in 118. For 57 of the respondents, it is easier or more comfortable to take notes and highlight on paper than online. Print resources are viewed as more accessible in 133 comments—ease of using (34), searching (28), and browsing (23) top the list. Reliability was an advantage for 50 faculty and 49 reported that the print collections had better selection.

Advantages of Print Resources	636
More useable	404
Easy to read and digest	196
Portable	118
Ability to take notes, highlight	57
Tangible	14
Familiar	11
Multiple books open at once	8
More accessible	133
Easy to use	34
Easy to search, find and obtain	28
Easy to browse and find reference	23
No technical issues	20
Easy to access	11
Easy/better to store	7
No need to photocopy or print	6
Available	4
More reliable	50
Permanent - won't go away	25
Accurate graphics and charts	16
Durable	9
Wider/better selection	49

Disadvantages of Print Resources

The primary disadvantage of print resources according to 187 responses concerned accessibility—lack of remote access (57 responses), limited access (49), availability (40), limited selection (21), and long interlibrary loan (20). Interestingly, 145 reported problems with usability, the number one advantage cited for print. They listed difficulties with searching (60), currency (33), portability (31), and coordination with online communication and resources (21).

Disadvantages of Print Resources	406
Less accessible	187
No remote access/harder to obtain	57
Limited access	49
Not always available	40
Limited selection	21
Interlibrary loans take too long	20
Less useable	145
Difficult to search and find	60
Quickly outdated	33
Cumbersome/bulky/heavy to carry	31
Hard to use with CMS*	12
Difficult to share	9
More expensive	74
Expensive	33
Require storage/physical space	30
Photocopying costs	11

*Course Management System like Blackboard

21. What are the advantages and/or disadvantages of ELECTRONIC resources for your research of instruction?

Advantages of Electronic Resources

The primary advantage reported for electronic resources was their accessibility, which garnered 356 of the 759 comments. The overwhelming majority (315) cited the ability to access electronic resources at any time from any place. Electronic resources were viewed as more useable in 333 responses with the lion's share (164) citing the ease of searching, finding and retrieving. They were also cited as easier for sharing and distributing (42), manipulating text and images (42), using (30), printing and downloading (29), and archiving/organizing (26). Electronic resources were viewed as more cost effective in 70 responses.

Advantages of Electronic Resources		759
More accessible		356
Any time, anywhere, immediate and convenient	315	
More people can use at once	36	
Better images	3	
Necessary for visually impaired	2	
More usable		333
Easy to search, find, browse, and retrieve	164	
Easy to share/distribute/transport	42	
Ability to manipulate text, images, etc./Use in CMS	42	
Ability to highlight, annotate, link, bookmark, etc.	30	
Easy to print/download	29	
Easy to archive/organize/reference	26	
Less Expensive		70
No storage/physical space required	26	
Cost effective	26	
Reduces printing/copying/better for environment	18	

Disadvantages of Electronic Resources

Usability was the primary concern according to 217 of the 406 comments contributed about the disadvantages of electronic resources. The three most common comments were associated with the difficulty to read (79), lack of portability (36), and the difficulty of dealing with the volume and questionable quality of resources (30). Comments concerning accessibility were cited in 91 responses. The most prominent

comments concerned the limited selection of online resources (37). 58 responses focused on the reliability of electronic resources with the majority of those (45) addressing the dependability of technology. Concern for cost associated with printing, the expense of some resources, or fees were contributed in 40 comments.

Disadvantages of Electronic Resources		406
Less Usable		217
Difficult to read online	79	
Not portable - need to be tethered to computer/internet	36	
Too much information/not always authoritative	30	
Difficult to highlight/annotate, copy/paste	12	
Difficult to search, find, and retrieve	9	
Difficult to use/various products are confusing	9	
Need computer skills and training	9	
Difficult to browse/scan	8	
Have to download/difficult to download	8	
Not tangible	7	
Difficult to use multiple documents at once	4	
Difficult to reference	4	
Not flexible	2	
Less Accessible		91
Limited selection online	37	
Not everyone has computers/connectivity	20	
Copyright limitations/embargoes/printing restrictions	19	
Not necessarily permanent	10	
Students forget how to use the library	4	
Access/authentication is cumbersome	3	
Less Reliable		58
Technical issues - depend on technology working	45	
Poor quality of graphics and images	5	
Not all documents complete/materials missing	5	
Easier to plagiarize/cheat	3	
Costs		40
Need to print anyway/incur printing costs	29	
Some resources expensive/some charge patrons	11	

22. Which of the following online resources do you think are appropriate for use by your students for most of your assignments?

E-journals topped the selection list with 88% of the responses. Educational, governmental, and professional websites were second with 82%. Online reference databases like online encyclopedias, Statistical Abstracts, and Business Dateline captured 74%. E-books picked up the fourth position with 65%. Just fewer than 50% of the respondents selected e-newspapers (46%) and e-magazines like Newsweek (45%).

Given that e-books contain information similar to and as appropriate for assignments as e-journals, it would be reasonable to expect them to have a similar ranking. Explanations for the low showing of e-books compared to e-journals can be gleaned from the responses to Question 30 (What do you feel would make e-book usage more suitable for use in your area?): Most collections are too small to be very useful, e-books do not compare favorably with print books for reading, and the interfaces to some vendor databases are awkward or confusing.

23. What types of electronic resources do you ask your students NOT to use for your assignments?

Blogs and wikis take top billing for the electronic resources (44%) that respondents ask students not to use for assignments. Personal web sites are second with 43%. Social web applications like discussion boards and YouTube are third with 35%. And 34% of the faculty responded that they do not prohibit the use of specific resources.

Courses and assignments have specific information needs that may dictate restrictions in sources. For example, the most common concern I hear from faculty is the use of personal web sites and blogs for research papers. Often faculty members tell students that they must have peer-reviewed material. Sometimes they specifically tell them not to use Google, where students often find blogs and personal web sites. However, other courses may encourage the use of blogs. For example, a political science course might want students to sample a variety of blogs and personal websites during an election. The responses to this question are helpful in that they provide librarians with an overview of the most common faculty concerns for appropriate information sources. They do not provide a general rationale for restricting any particular source of information. They merely indicate where librarians can assist faculty—i.e. with instruction of students in the selection, evaluation, and use of information resources.

24. Are students required to use print or electronic resources for assignments in your courses?

Textbooks are still the common base of the curriculum for courses and probably account for the preponderance of the 71% of the faculty who indicated that they required use of some print resources for assignments. Just over 70% of the faculty indicated that they require use of some electronic resources.

25. Where do you think students are accessing most of the information resources beyond the textbook and handout that they use for your assignments?

Over 50% of the respondents assume that students access most of the information beyond the textbook and handouts from search engines like Google. Only 24% thought that students mostly used library provided electronic resources. This is a dismal set of assumptions though I do not believe for librarians it is unexpected.

26. What are the difficulties associated with information resources?

The top four difficulties associated with information resources concern the lack of student knowledge of information resources. Nearly 85% of respondents indicated they believe students do not know how to evaluate the validity of information resources. Over 70% believe students do not use resources from the Internet that are appropriate for assignments. And 58% and 43% respectively feel that students do not know how to use library electronic or print resources.

Nearly 30% of respondents that indicated that they do not believe there is enough instruction in the use of electronic resources, which is curious. It indicates that faculty do not believe that instruction has, or that more will, overcome the gap in student knowledge concerning information resources. This seems a counter-intuitive position for educators to hold. I see three possible explanations. The low expectations for the effectiveness of more instruction could be explained by the hesitation on the part of faculty to assert that librarians are not providing adequate instruction. In most academic settings these days, instruction in information literacy has dramatically increased. Library faculties are stretched to the limit in their efforts to provide comprehensive instruction in the growing list of topics in which all students should receive instruction. The second explanation concerns student choice. Faculty may assume that the primary problem is student seduction by the Google phenomenon. It is the easiest thing for students to do and they are not likely to change with further instruction. The

third explanation is that faculty members believe the problem is student lack of subject area knowledge when doing research rather than information illiteracy.

Whatever the explanation for the discrepancy between the high number of responses concerning student lack of knowledge as a problem and the relatively low score for lack of instruction being a problem, I believe student information illiteracy could be significantly ameliorated through comprehensive information literacy instruction. In the typical hour to two hour library instruction session, it is common that only a portion of students who need instruction receive it. Those that do receive instruction have generally been introduced to a small portion of the topics associated with the growing array of topics that need covering. And of that group, many have been on the tour multiple times and seen the same small portion of instruction in the basics. Access to the students is driven by the requests of the faculty associated with particular courses so students get the same lecture in multiple classes. Comprehensive instruction in information literacy for all incoming students is generally not the norm for most colleges and universities at this time. The result is that only a portion of the student population is exposed to a small portion of library resources and concepts associated with information literacy in the context of the rapidly changing information environment.

The shift in information access because of the Internet has increased the need for instruction in the rapidly expanding global information sphere. The days of a library tour that centered on the catalog and how to find things in the library are gone. Appropriate topics for information literacy include concepts of peer review, evaluation of information resources, thoughts on plagiarism, instruction in citing resources, the presentation of a variety of search strategies, instruction in e-journal and e-book database interfaces, the selection and use of search engines, the use of tools like those provided by Serials Solutions, and instruction in a host of proprietary and open access information databases. The list continues to expand as more resources relevant to the curriculum continue to appear and evolve more sophisticated interfaces to a growing complexity of data structures.

The magnitude of the information literacy needs may also be the explanation for why instruction is not reported by faculty in the above question as the answer to the lack of student knowledge concerning information literacy. There is no apparent solution to a problem that seems so overwhelming. The problem, I believe, is information illiteracy in the context of the new information sphere. The solution is comprehensive integration of information literacy horizontally and vertically throughout the curriculum.

27. Of the following instruction methods for information literacy, which would you be willing to have for your courses?

Only 6% responded with none. The large majority of the faculty indicated that they were in favor of some form of information literacy instruction as part of their courses. The favored method of information literacy instruction is the least intrusive—online tutorials selected by 58% of respondents. They require no class time and have no associated tests or assignments. An additional benefit is that online tutorials expand the reach of the limited library faculty, which opens an avenue to comprehensive information literacy instruction. It would be reasonable to expect that faculty would not want to give up class time or impact their subject area assessment strategies since information literacy is related to but outside of the course subject areas. I would argue, however, in favor of some form of assessment that comprised a small portion of the course grade, perhaps multiple choice questions that could be automatically graded and posted through course management software like Blackboard. Over 45% of the faculty responding to this question agreed. They selected the option for online tutorials with graded assessment as part of the course. Students to a large extent weigh the effort they give to learning on the scale of probable impact to their grade. In my experience, it has been demonstrated very clearly that few students will even participate in non-mandatory library instruction. And those that participate in mandatory instruction are likely not paying much attention unless they believe it will impact their grade.

28. How necessary do you believe instruction in information literacy is to student research and learning?

The responses to this question provide a measure of the growing awareness of the underlying need for information literacy. Nearly 85% of the respondents indicated that it was very necessary. Almost 15% indicated somewhat necessary. Less than 1% thought it was unnecessary.

29. Do technical difficulties impede use of electronic resources at your institution?

Nearly 60% of the respondents indicated that technical difficulties impede use of electronic resources at their institutions at least some of the time. For 33% of respondents, technical difficulties are not a problem. The following are a sampling of some of the comments provided by 179 faculty who selected 'yes' or 'sometimes.'

- Access and connectivity problems
- Network downtime
- Issues with course management software
- Not all students have computers
- Authentication issues
- Limited internet access
- Limited site license
- Bandwidth limitations
- Constant upgrading and maintenance issues
- Cost - students have to pay for internet access
- Difficulty logging in remotely
- Students forget passwords
- Remote access is confusing, with proxy servers, numerous passwords, etc.
- Difficulty downloading large files remotely
- Instability of vendor products
- Software compatibility issues
- Unreliable IT department
- Using vendor products/turning pages is slow

30. What do you feel would make e-book usage more suitable for use in your area?

Greater breadth and depth of collection garnered the top response position with 56% followed by the ability to download (52%) and less restriction on printing and copying (50%). Just fewer than 34% suggested adding more current titles. Finally, 25% of the responding faculty noted the need for better training and instruction. If we as librarians assume that it is still important to make sure students know how to use the library's catalog, instruction in the use of the more complicated vendor e-book interfaces should also be considered a must.

31. Would you prefer your library to own or subscribe to e-books and why?

About a third of respondents indicated that it does not matter for their needs, and 29% indicated that they did not know why it would matter. In other words, for 62% this is a non-issue. The responses to question 30 make it clear that their concerns are for greater breadth and depth of the collection, the ability to download e-books, and less restrictive printing and copying however it is accomplished.

CONCLUDING SUMMARY

The most notable aspect of faculty usage of electronic and print resources for research and instruction was the strong preference overall for using electronic resources. Approximately 50% prefer electronic versus 18% for print. For 72% of the respondents e-journals provided more effective access than print and 68% found them easier to use. Reading a whole book or extensive sections of it was an obvious exception for 79% of the respondents who preferred print. The electronic resources that faculty thought were most appropriate for the majority of their assignments were e-journals (88%); educational, governmental, and professional web sites (82%); online reference databases (74%); and e-books (65%). This closely reflected the preferences faculty reported for their own usage.

The responses by faculty over e-book and e-journal concerns and usage are very similar with the notable difference that e-books lagged behind in usage. Faculties want access to more resources, better tools for searching and using, and many do not like reading online. They are both used for student and faculty research, as assigned readings, and for course preparation.

The overwhelming majority of faculty (85%) viewed instruction in information literacy as very necessary. Almost 15% saw it as somewhat necessary with less than 1% viewing it as unnecessary. A majority of the faculty (58%) preferred the least obtrusive form of instruction for their classes—online tutorials with no assessment. Approximately 45% of the faculty selected tutorials with assessment.

The clearest message from this survey for publishers and vendors is to increase the breath and depth of collections, to provide portable reading devices, and to evolve continually more powerful research tools. For librarians the message is aggressive pursuit of the electronic resources most relevant to the curricula of their institutions and comprehensive instruction for their effective use.

Allen W. McKiel, Ph.D.
Director of Libraries
Northeastern State University
mckiel@nsuok.edu

Contact ebrary

318 Cambridge Ave.
Palo Alto, CA 94306
USA



Main Tel: +1 650-475-8700
Sales Tel: +1 866-4-EBRARY
Publisher Relations: publisher-relations@ebrary.com
Fax: +1 650-475-8881

For a free trial or additional information, please complete our information request form at www.ebrary.com/corp/inforequest.
For a listing of ebrary's global distribution partners, please visit www.ebrary.com/corp/contactConsNet.jsp.