



## **SURVEY RESULTS**



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## EXECUTIVE SUMMARY

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### Introduction

Collaborative teaching and learning tools include a variety of hardware used to view, create, and present information. This survey specifically focused on equipment, devices, or systems being offered to research library users in a self-service environment for individualized, user-initiated, collaborative teaching and learning. Many of these tools have steep learning curves, while others are much more intuitive and are used extensively across research institutions. They may be located at the libraries or elsewhere at the institution. While some tools lend themselves to collaborative teaching and learning, others may be associated with individualized teaching and learning scenarios. Although many institutions provide loanable technology for educational use, there is little documentation of such programs. The survey provides a snapshot of what is or will be offered in 63 libraries at 61 of the 126 ARL member institutions.

### Equipment Offered

The 13 types of tools addressed in the survey range from traditional classroom-based resources (e.g., whiteboards) to more sophisticated technologies repurposed for educational uses (e.g., videoconferencing systems). Respondents were asked to identify which of the tools are currently offered at their libraries, which technologies they are planning to provide, which they do not plan to provide, and, if the library does not offer the tool, whether it is available elsewhere at the institution. The survey also asked how many of each type of tool is or will be available. Sixty-one of the 63 respondents (97%) currently offer at least one form of collaborative teaching and learning tools to their users.

Not surprisingly, non-interactive whiteboards are the most available tools identified in the survey. Fifty-eight institutions (97%) have or plan to have them; only two libraries have no plans to offer whiteboards. The number offered ranges from two to 100 per owning institution, with an average of approximately 23 units.

Laptops are the next most commonly available tool. Forty-one of 62 responding libraries (66%) offer or plan to offer laptops. These libraries offer about 59 laptops, on average. At least one respondent reported that while the institution strives to offer emerging technologies, the laptop loan service continues to be “one of [the] most popular and appreciated services” offered by the libraries. In contrast, another respondent noted that they are discontinuing laptop check-out and are instead encouraging students to bring in their own. One institution described the transition from a laptop to netbook loan service as a way to increase the number of units available to users, “given the lower price of [them].” Touchscreen tablet computers such as iPads and Android tablets (e.g., Motorola Xoom) are or will be available at 38 institutions (61%), with owning libraries offering an average of 12 units. E-book readers are also offered or will be offered at 24 ARL libraries (39%), with an average of 10 readers at each library.

Collaborative devices for multimedia production are widely available. Forty libraries (63%) offer video recording devices such as the FlipVideo tapeless camcorder. These institutions reported supporting an average of 13 units each. Fifteen libraries (24%) do not plan to offer these devices, and eight (13%) indicated the equipment is available elsewhere within the

institution. Similarly, more than half the respondents reported having audio recording aids at the library (34 responses or 55%). Several (11 or 18%) reported that other locations on campus have these devices.

Thirty institutions (49%) reported they currently offer or plan to offer interactive whiteboards. These collaborative tools are available elsewhere at 11 institutions (18%), but 20 others (33%) reported that they do not plan to offer this tool. Although interactive whiteboards are used in libraries and throughout several reporting institutions, interactive learning centers (touch tables) that use comparable technologies are only available or will be available at 15 libraries (25%). The specialized nature of content to optimize use of a tool, such as GIS, may contribute to its low response rate. A tool commonly associated with the interactive whiteboard—the audience response system with clickers—is or will be in place at 29 institutions (48%), with an average of 120 clickers at each owning library. Twenty-three respondents reported that audience response systems are being used at locations other than the library. One institution commented that ABTutor or polleverywhere served as an alternative to the audience response system.

Handheld videoconferencing devices such as webcams are offered or will be offered at 14 of the reporting institutions (23%), with an average of 32 units, and one respondent commented that some tablet computers and laptops are equipped with a built-in camera with audio and video capability; since this capability enables use for videoconferencing purposes, purchase of standalone devices was deemed unnecessary. Thirty-six institutions (61%) currently offer or will offer videoconferencing systems. Few libraries offer their patrons gaming systems (eight institutions or 13% with an average of four units each) and personal digital assistants are no longer popular (three institutions or 5%).

Thirty respondents reported they support a variety of other devices, electronics, systems, and workspaces to allow creation, viewing, and editing of information. Viewing devices are mentioned most frequently; monitors and projectors allow a larger group of users to work together without having to crowd around a small monitor. Nine institutions (30%) have anywhere from two to “dozens” of display

monitors (LCD and plasma). Eight have between two and 25 projectors (portable to larger data projectors). An alternative to a single, large display is collaborative workspace offered by Steelcase. Mentioned in eight of 30 responses (27%), this media:scape workstation system is described as providing a “collaborative seating arrangement [with] a large screen monitor and table for laptops that connect.” media:scape allows users to shift quickly between displays of connected laptops and other devices such as an iPad. Responding institutions had as few as one station and as many as 20 at some libraries.

Several institutions offer other computer electronics such as scanners, drawing tablets, and various storage media. Headphones (three institutions owning a range of 16 to 60 units) and microphones (six institutions ranging from three to 37 units each) vary from very basic to professional quality. Smaller accessories necessary to optimize use of computing and productivity tools (such as adapters and cables) are noted to be available in “kits” or as standalone items to be used in the library.

Reference to multimedia production was in connection to technology-rich spaces within the libraries, sometimes referred to as information commons, media centers, or knowledge commons. One library reported jointly administering the spaces with institutional/campus technology departments and reported those holdings. Among the equipment frequently maintained for video and audio production are digital cameras (ranging from four to 18 units each at seven institutions) and accessories, including tripods. One respondent explained, “[providing] editing facilities [is] used to integrate media from our collection into academic projects. In addition to using found footage and content in digital productions, our users can also create new content using the digital still and video cameras, audio recorders, and accessories like lighting and microphones.” Audio players, video editing equipment, and video conversion tools, audio editing equipment, imaging technology, music keyboard and mixing boards, transcription kit, and 3-D modeling and animation equipment were reported as available by at least one institution. Appropriate software packages to use these tools are installed when necessary.

Unique responses designated as collaborative tools by respondents included large-scale poster plotters, GPS, and PA systems. Non-electronic tools offered included graphing and scientific calculators, project lockers, media viewing rooms, presentation practice areas, module and mobile furniture, green screens, and carts for transporting equipment.

### Equipment Location

The locations of learning and teaching tools include open user areas (such as reference or information commons areas), classroom or teaching/training labs, group study rooms, the circulation desk, and other facilities across the institution, including library conference rooms, campus computing centers, media centers or information technology labs for instructional support services, student unions, and dorm study rooms.

Non-interactive whiteboards are found in many locations at the 63 responding institutions, including open areas (32 responses or 57%), classrooms/labs (30 or 54%), and group study rooms/spaces (43 or 77%). The prevalence of this non-digital collaborative tool is likely due to its inexpensive and easy-to-maintain nature.

Interactive whiteboards are in open spaces at nine institutions (25%), though more often they are housed in classrooms/labs or group study rooms. Nine of the 14 libraries that have interactive learning centers put them in public spaces in the library; one library indicated a touch table is available in an exhibition area within the special collections library.

Although some tools are available in open spaces, expensive equipment is typically not found in open, unregulated areas in the library unless mounted (e.g., plasma displays), grounded (e.g., media:scape tables), or installed to another device (e.g., videoconferencing devices or scanners).

Videoconferencing systems, interactive whiteboards, and audience response systems are commonly found in classroom/lab environments and group study rooms. In the classrooms they are usually only for faculty use. Respondents' additional comments showed six instances of videoconferencing systems housed in conference rooms.

Many of the tools available for loan and use on-site include laptops, video recording devices, audio

recording devices, touchscreen tablet computers, calculators, and e-book readers. Associated peripherals such as keyboards, portable scanners, projectors, power cords, and cables for monitors and webcams are also loaned by at least one institution. Monitors, keyboards, and some other tools/devices for media or video production are sometimes held in the group study rooms (five institutions) and are, in effect, checked out at the time of reserving the user space. The media:scape tables are held in various locations throughout the libraries; institutions varied by making them either openly accessible on a first come-first serve basis or loaned via check out of a group study room.

### Scheduling

Forty-six of the responding institutions (74%) indicate they use some kind of scheduling process to reserve collaborative teaching and learning tools. The most common methods are scheduling equipment in person (20 responses or 44%) and using a form on the library's website (19 or 41%). A few libraries accept reservations by sending an email, scheduling via the catalog, calling in a request, and using an online calendar such as Oracle or Outlook. Four institutions use a commercial booking system (e.g., OnShore Development). The catalog or homegrown systems are most often used for advanced booking. One institution indicated that, "Check out of more advanced/expensive equipment... sometimes requires faculty sign-off." One institution uses touchscreen tablets outside of study rooms for on-the-fly scheduling.

While respondents are not consistent with the systems used to schedule and reserve tools, they reported some consistency with what is scheduled. Respondents focused either on a specific tool or on booking user spaces that are equipped with tools not individually checked out. Fifteen institutions (68%) reported they book group study rooms or classrooms that house various tools. Examples of this practice are booking the media production room to reserve video equipment and green screens, presentation space to check out monitor and cables, or a group study room to reserve the interactive whiteboard or videoconferencing system. Examples of devices that can be reserved include laptops and e-book readers. These are

barcoded and checked out to the user's institutional identification/library card.

### Decision Drivers

Libraries decide to make learning and teaching tools available to users based on a number of drivers. Respondents to the survey indicated that user request is the most compelling reason to purchase collaborative tools (54 institutions or 87%), while recommendations from a library committee or staff member is the second highest driver (52 or 84%). The third highest driving factor comes from university department collaborations, where libraries focus equipment purchase on tools integrated into the classroom and curriculum (36 or 58%). Adding the tool to designated technology-rich spaces in the libraries (e.g., the information commons) was the fourth highest reported driver (34 or 55%).

Other decision drivers for the purchase and support of collaborative teaching and learning tools range from a consideration of trends and best practices to input from faculty or students. Opportunities such as new construction projects, donations from private donors, improved wireless coverage, and allocation of student technology fees influenced the decision for other institutions. One respondent noted that a plan for continuous assessment of user needs should be in place before including technology. As this plan develops, user demands and expectations may also evolve.

### Use Policy

When asked about restrictions on the use of teaching and learning tools, many of the respondents (26 or 43%) indicated that some tools are available to some users while others are restricted. Eighteen (30%) indicated that use is restricted based on user category, while a comparable number (17 or 28%) revealed that all tools are available to all users.

Forty-five respondents provided additional information about restrictions on tool use. In the majority of cases (29 or 64%), currently affiliated students, faculty, and staff can use any of the offered collaborative tools. In some cases (11 or 24%), only students can use the equipment, as purchase and use agreements are governed by the student technology fee paid or other grants specifically targeted to students. At two

institutions, students can only reserve an interactive whiteboard if faculty have "signed-off (via email)" on their use. In other cases (nine or 20%), teaching staff (both faculty and graduate students) are eligible to use tools such as cameras, audio recording devices, and laptops. In one case, the library restricts use to a specific population: "Video cameras and digital audio recorders are available to faculty/students teaching/enrolled in a class using oral history or other guided interview methods in coursework."

Twenty-six of the responding libraries (43%) require a registration process for use of many of the collaborative tools, while the same number of respondents indicated that neither training nor registration is required. The registration process typically requires users to sign an agreement, when they checkout such items as laptops, iPads, MacBooks, cameras, and audio recording devices, that specifies, "They agree to certain responsibilities including how the equipment can be used and their financial obligation in the event of theft, loss, and/or late return" (15 responses or 54%). Registration is usually a paper agreement form, but one respondent indicated that users must complete an online agreement form to book a Kindle in the catalog.

In four instances (14%), users contact staff directly to register to use videoconferencing tools, iPads, and Blackberries. At six institutions (21%) students are automatically registered when they check out laptops and iPads in the library system or during advanced booking by web form.

### Training and Technical Support

A quarter of the responding libraries require users to complete training before using these tools. In some cases, library staff simply provide brief presentations that cover use policies, basic equipment operation, and "general how-tos." One institution requires training for iPads that are used in instructional seminars they offer on the use of medical apps. More complex or very specialized equipment, such as recording studios, multimedia workrooms, videoconferencing equipment, and video cameras, require more extensive training. One institution uses online videos—student technology workers in the media center developed online training modules that users must complete before receiving any equipment. Another institution offers



a workshop for interactive whiteboard use. In one instance, certification is required for “some complex equipment.” Where training is not required, instructions on how to use the equipment is offered upon request.

More than half of the 58 responding libraries (33 responses or 57%) reported that both library IT/systems and non-systems staff play a role in training their coworkers to use and troubleshoot collaborative tools. About a third of these 33 also turn to their parent institution IT staff and/or commercial vendors for training. At 12 libraries only non-IT library staff provide training or troubleshooting. Five rely solely on library IT staff. Only two respondents report training or troubleshooting only by the parent IT staff. The high number of respondents who depend on non-systems staff for training/troubleshooting (47 or 81%) indicates the need for immediate support for staff in public service functions. One respondent describes staff being trained by “super users” in their area. Another commented, “It depends. Most troubleshooting is done and documentation developed by front-line staff. When necessary, IT staff will help resolve technical problems. We intentionally wanted equipment and systems that were readily usable and wouldn’t require staff help.”

When asked who provides technical support for library users, the responses were almost identical to who provides training. The majority of respondents once again depend on either non-systems library staff (47 of 61 responses) or library IT/systems staff (40 responses). With a few variations, the same libraries rely on the parent institution’s IT/systems staff for user support. Only four respondents receive user technical support from vendors. This suggests a dependence on “train-the-trainer” sessions for library staff who receive the training directly from vendors and then pass that knowledge on to the users. Comments on this question also hint at support for students by students.

Not surprisingly, maintenance and repair of collaborative teaching and learning tools shifts more to library IT/systems staff (49 or 81% of responses overall). The number of libraries that rely on non-systems library staff goes down to roughly half. Most of these 30 respondents also depend on library and parent institution IT staff and vendors for maintenance and

repairs. Most of the remaining 31 respondents rely on a combination of library and parent institution IT staff and commercial vendors. Additionally, responses in the “other” category imply that institutions are willing to go “out-of-house” (e.g., outsource) to keep highly technical tools in good working order. Reliance on commercial vendors for repairs and maintenance is also likely a reflection on the contractual obligations of the suppliers to honor warranties for malfunctioning parts or hardware.

Considering the complex nature of new technology and hardware involved with the wide variety of collaborative teaching and learning tools, responses to this question and the previous support questions clearly indicate that institutions depend greatly on their IT/systems staff for maintenance and troubleshooting of highly technical hardware and software. However, right along with them are non-IT/systems library staff members that provide assistance in about half of each of the troubleshooting, technical support, and maintenance scenarios.

### **Financial Support**

Initial purchase of collaborative teaching and learning tools in libraries is done through a variety of funding sources, but chiefly they are acquired through the general library budget (53 responses or 86%). The library’s IT/systems budget came in second as a source of funding for half of the responding libraries. About a third relied on the parent institution’s IT/systems budget or student technology fees. Grant funding from outside agencies is used by roughly one-fifth of the libraries. Only six respondents reported using a public/private partnership for funding. The “other” responses fall into several discernable categories: donations/donor funds (seven responses); other institutional departments (four responses); endowment funds (three responses); and renovation/construction funds (three responses). One respondent reported using library fines and fees. Another is considering using collection development funds in the near future to buy e-readers and iPads. A third received funding for laptops and netbooks from a local credit union, while one library system used “shared funding” of student technology fees by collaborating with other units on campus. Such creative and varied responses suggest libraries

themselves are being innovative when seeking outside funding streams to purchase cutting-edge tools.

Funding for ongoing maintenance and replacement of equipment follows a very similar pattern to that of initial purchase funding: most respondents depend on the general library and/or IT/systems budget. Funding from student tech fees drops to 25% of respondents and from the parent institution's IT/systems budget falls to 20%. As might be expected, grant funding and public/private partnerships drop off considerably after initial purchases of equipment and the parent institution or library takes over maintenance and repair. Two libraries use library fines and fees for maintenance and repair. One institution generates income from a "Distance Learning Library Services program." One library hopes that as some collaborative tools gain popularity across campus that university administration will acquire a site-license.

Only four libraries report charging fees for the use of collaborative teaching and learning tools. One institution charges unaffiliated users a fee to use some equipment and rooms. At one library, late fees are \$5 an hour for electronic equipment and \$1 an hour for accessories. Another library charges a fee for late return of laptops (\$20/hour, up to a maximum of \$200). While no up-front fees are charged to affiliated users of these institutions, refusal to adhere to use policies and due dates for electronic equipment potentially can be seen as additional revenue stream for their purchase, maintenance, and repair.

### **Publicity and Evaluation**

When offering a new service, libraries often try to publicize the new service through a variety of media such as library websites, fliers, social networking sites, email, newsletters, and the campus newspaper. However, when asked how they promoted the availability of new collaborative teaching and learning tools in their libraries, respondents overwhelmingly relied on simple word of mouth (59 responses or 95%). Not far behind that response are announcements on the library website (56 or 90%), followed by mentions in library classes and tours (54 or 87%). Such seemingly passive promotion of a new service may be due to the technical support and large learning curves associated with tools that may be deemed technologically

advanced for library staff and users. Even a traditional method of promotion like signs and flyers (42 or 68%) ranks slightly ahead of "web 2.0" social networking methods like Facebook, Twitter, YouTube, etc. (40 or 65%). Fewer than half of the respondents reported using email (30 or 48%), library newsletters (29 or 47%), or campus newspapers (16 or 26%), signifying much less reliance on these methods as a means to reach a more technologically advanced user. Open-ended responses indicated use of various "digital signs," e.g., electronic signs on campus or screen savers on workstations, to reach potential users. Three respondents relied on library outreach or liaisons to campus departments. Two libraries used institutional websites, while one had not started marketing initiatives, yet.

Similar to the methods employed in publicity, assessing the success of offering collaborative teaching and learning tools is largely informal in most of the responding libraries. Informal user feedback (57 or 93%) and tracking the number of uses of each tool (55 or 90%) are the two most common evaluation methods. Surprisingly, fewer than half indicated they use formal surveys of users (26 or 43%), though an analysis of the "other" responses shows this number is misleading. Three libraries report using focus groups, two others use faculty surveys, one uses an "Opinions Survey," and yet another relies on the library's annual survey—all of which can be viewed as methods of formalized user surveys. As a measure of user demand, the fourth most popular evaluation technique is tracking the number of requests for each tool (24 or 39%). Some libraries track the number of technical support requests for each tool as an evaluative measure (16 or 26%). One library has recently hired an "Assessment Librarian," whom they hope will be able to track evaluation of support for collaborative teaching and learning services. Interestingly, one library somehow tracks "turn aways" (i.e., number of users turned away from a service desk because all of the needed tools are checked out).

### **Benefits and Challenges**

Some of the most informative and thought-provoking comments in the survey come from the sections in which respondents were asked to list up to three benefits and three challenges associated with



offering collaborative teaching and learning tools in the library. The amount of benefits and challenges are nearly equal, but the number of unique statements for challenges seems to outnumber the beneficial ones. Although the responses are quite varied, several noticeable themes emerge.

The benefits of providing collaborative teaching and learning tools cover many needs of the research community. Their very nature seems to be the inspiration for a large majority of the respondents who feel these tools support a collaborative teaching and learning environment, as evidenced by responses that mention the benefits of team learning, supporting collaborative work and new teaching styles, and meeting the changing needs of teaching, learning, and research at their institutions.

The second most common perception held by respondents is that the popularity of collaborative tools serves as good publicity and outreach for the libraries:

- “Brings users to the library.”
- “Broadens the identity of the library on campus.”
- “Allows us to reach people who might not normally visit.”
- “Good marketing for the library as a technologically relevant place.”
- “Fulfills a user need, thus providing good PR.”

Several comments emphasize the importance of having access to new tools and technology for users in developing the much-needed knowledge, skills, and abilities within a 21st century knowledge discovery environment:

- “Access to technology for workplace skill development.”
- “Improves their skills for future entrance into the work force.”
- “Provides students with valuable skill-sets that will make their resumes and grad school applications more competitive.”

Quite a few responses point out the added benefit for users of increased access to new tools and cutting

edge technology. The libraries absorb the sometimes prohibitive cost for researchers to experiment with new tools, thus evening the playing field for economically disadvantaged users.

A few institutions stress the mere convenience and flexibility of being able to check out laptops and how that too extends learning beyond the classroom. Another common theme is that offering these tools enhances the users’ learning experiences in and out of the library and also provides improved patron services. Other responses mention satisfying user needs and demands, as well as keeping the library up-to-date and relevant.

When respondents were asked to identify challenges, an overwhelming number of comments concerned costs associated with the initial purchase of these tools. They also expressed the need for recurring funds devoted to technology maintenance, repair, and replacement. Even though not requiring institutional funds, one respondent interestingly pointed out that, “even free apps require having a credit card on file.” Technologies that are lent out could easily be damaged and expensive to repair or replace. Several respondents were concerned that the budget for more traditional library materials (e.g., books) would be cut in favor of buying technology tools.

Another prevalent issue is that collaborative teaching and learning tools always need updating:

- “Keeping up with rapidly changing technologies.”
- “Things change so quickly, deciding where to invest is a challenge.”
- “iPads are challenging to keep updated.”
- “Some technologies are on their way towards obsolescence by the time a service for them is launched.”

A number of the responding libraries mentioned the effect on staff workload and the learning curve involved in keeping up with the latest hardware and software. The time involved in assisting patrons and troubleshooting seems to be taking a toll on some library staff, as one pointed out they, “must maintain a bigger workload with the same number of hours in a day.”

With the influx of new technology comes a rise in the need for technical support that includes the maintenance and upkeep of a variety of devices and platforms. Several libraries seem to be struggling with defining who provides this support and how. Their concerns include:

- “Difficulty in supporting combination of university-owned and student-owned equipment.”
- “How to provide technology support and content/reference support at point of need.”
- “Library IT support for tools that often fall outside the profile of equipment routinely supported.”

The public relations activities involved in getting the word out effectively to influence user buy-in seem to be challenging for one or more libraries:

- “Instructors are not always supportive or interested in their students using these resources.”
- “Some faculty and staff (including library staff) do not understand why the library is involved in providing these tools to users.”
- “Communication between partners is essential and any breakdown can negatively impact services and user experiences.”

Other challenges mentioned include meeting user demand, security, developing policy and procedures,

and scheduling. Lack of space, or adequate space at least, in existing libraries for collaborative tools and learning is also a concern for some: “It’s hard to carve out space for group rooms in the current footprint of our buildings.” Surprisingly, only one respondent mentioned the issue of copyright and licensing as a concern. One library aptly pointed out an often overlooked challenge: personal privacy can sometimes be compromised when using shared teaching and learning tools.

### **Conclusion**

Results and documentation from this survey demonstrate the variety of collaborative equipment, devices, and systems available or soon to be available to research library users. When considering the provision of collaborative teaching and learning tools, one must take into account the institutional mission, policies, infrastructure, budgetary constraints, staffing, and user demand and expectations. What should be purchased? How many to purchase? Who can use them? Where can they use them? When can they use them? How will they use them? When and how will they be updated? Who will do the updating? Who will train the users? Who will train the staff? Institutions thinking of offering such resources in the future can perhaps make more informed decisions by assessing the experiences reported by ARL libraries in this survey. The study seems to indicate these tools not only enhance current services at libraries but also improve the libraries’ image as a dynamic and responsive partner of the research community.

## SURVEY QUESTIONS AND RESPONSES

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The SPEC survey on Collaborative Teaching and Learning Tools was designed by **Marilyn N. Ochoa**, Assistant Head of the Education Library, and **Thomas Caswell**, Assistant Head of the Architecture and Fine Arts Library, at the University of Florida. These results are based on data submitted by 64 libraries at 61 of the 126 ARL member libraries (48%) by the deadline of March 5, 2012. The survey's introductory text and questions are reproduced below, followed by the response data and selected comments from the respondents.

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Recent library literature emphasizes the increase in technologically savvy library users and the development of "information commons" or "collaboration labs" to serve them. However, little has emerged to give insight on the details of offering complex and technologically advanced collaborative teaching and learning tools, such as interactive whiteboards, to library users. The ability of a library to offer such equipment carries with it a large learning curve, for both users and library staff, along with financial and technical support issues.

This survey is designed to gather information about what collaborative teaching and learning tools are currently being offered to users in ARL member libraries. It covers questions on which kinds of tools are offered, how many, and why, where they are located, who may use them, the sources of funding, who provides training and support, and what techniques are used to promote and evaluate the tools. Data and documentation gathered from this survey should provide a snapshot of collaborative teaching and learning tools currently offered in academic and research libraries and also provide a basic framework for those thinking of offering such resources in the future.

For the purpose of this survey, "collaborative teaching and learning tools" are limited to the equipment, devices, or systems being offered to research library users in a self-service environment including, but not limited to, the following: interactive whiteboards (IWBs, e.g., SMART Board), touchscreen tablet computers (e.g., iPads), classroom/audience response system (e.g., clickers), interactive learning centers (e.g., TouchTables), and Wii gaming systems. Please restrict responses to this survey to those services and equipment that result in individualized, user-initiated, collaborative teaching and learning scenarios.

## EQUIPMENT OFFERED

1. For each of the following types of collaborative teaching and learning tools please indicate whether the library currently offers it, plans to offer it in the near future, or has no plans to offer it. If your library does not offer the tool, please indicate if it is available elsewhere in your institution. N=63

	Currently Offers	Plans to Offer	No Plans to Offer	Available Elsewhere	N
Video recording devices (e.g., FlipVideo cameras)	36	4	15	8	63
Laptops	40	1	14	7	62
E-book readers (e.g., Kindle, Nook)	20	4	37	1	62
Touchscreen tablet computers (e.g., iPads)	23	15	20	4	62
Audio recording devices	31	3	17	11	62
Interactive whiteboards (IWBs, e.g., SMART Board)	26	4	20	11	61
Gaming systems (e.g., Wii)	8	6	42	5	61
Non-interactive whiteboards	56	2	2	—	60
Classroom/audience response systems (e.g., clickers)	26	3	8	23	60
Interactive learning centers (e.g., TouchTables)	7	8	40	5	60
Videoconferencing systems (e.g., Polycom)	33	3	12	11	59
Personal digital assistant	3	—	53	3	59
Handheld videoconferencing devices (e.g., Dell Streak, webcams)	10	4	38	6	58
Other tool(s)	33	2	—	—	35
Number of Responses	61	33	60	37	63

If you selected "Other tool(s)" above, please briefly describe it and specify whether your library currently offers it, plans to offer it, or it is available elsewhere in your institution. N=35

### Currently Offer N=33

	N=26
Audio/Video	
Digital camcorder	4
Tripod for cameras and camcorders	4
Portable green screen	3
Lighting equipment	3
Midi keyboards	2
Digital audio recorder	2
Audio/video cables and adapters	2
AMP speaker	2
AMP speaker stand	1

Video converter	1
Digital wave recorder	1
Mixing board	1
<b>Monitors/Projectors</b>	<b>N=18</b>
Display monitors	9
Projectors	6
Portable LCD projectors	1
Data projector	1
SMART Podium	1
<b>Other Devices</b>	<b>N=18</b>
Digital and SLR cameras	8
GPS devices	3
Pen/drawing tablets	3
DVD Player	2
DVD/VCR	1
VCR	1
<b>Accessories/Adapters</b>	<b>N=15</b>
Microphones	6
Headphones	2
Wireless keyboards	1
Accessory Bag	1
Security cables	1
Firewire	1
Power cord/strip	1
Remote controls	1
Laser pointer and power presenter (wireless)	1
<b>Other Tools</b>	<b>N=11</b>
Scientific/graphing calculators	4
Microscope	1
Transcription kit	1
Skype kit	1
Magic Planet	1
Cart	1
Virtual reality	1
PA system	1

<b>Collaborative Spaces</b>	<b>N=11</b>
media:scape workstations	8
Skype room	1
Media viewing rooms	1
Project lockers	1
<b>Scanners/Printers/Copiers</b>	<b>N=10</b>
Scanner	2
Portable scanner	2
Large-scale poster plotter	2
Polyvision CopyCam	1
3D scanner	1
Imaging technology	1
Rapid prototyping	1
<b>Storage</b>	<b>N=9</b>
External hard drives	3
Flash drives	3
Memory card readers	1
Memory cards	1
Zip drive	1

### Plan to Offer N=2

Developing presentation practice studio space.

Media:scapes will be part of a scheduled renovation this summer.

### Selected Comments

Although we don't offer webcams as a separate item for checkout, our 160 Dell laptops have webcams installed in them.

Media:scapes. These are collaborative seating arrangements that have a large-screen monitor and table for laptops that connect—with a switching device that allows users to quickly shift displays between connected laptop—or device such as an iPad.

The library has plans to offer iPhones at one branch to explore the utility of mobile devices.

Video and audio recording is available in our presentation practice room only. We do not check out these devices. The Polycom system is available in our Business Library, but it is available to the College of Business community only.

We have three interactive whiteboards but do not believe they are easy enough for users to operate. We previously circulated laptops from our circ desks, but decided to discontinue the service. We are doing things to encourage students to bring their own laptops instead.



If making these tools available for users is in the planning stages, please answer the following questions to the best of your ability based on plans at this time.

## NUMBER OF TOOLS

2. Please indicate how many of each tool your library currently offers or plans to offer. N=61

	Minimum	Maximum	Mean	Median	Std Dev	N
Non-interactive whiteboards	2	100	22.87	14.50	23.34	52
Laptops	1	300	59.37	35.50	60.39	38
Video recording devices (e.g., FlipVideo cameras)	1	60	13.30	8.00	14.34	37
Touchscreen tablet computers (e.g., iPads)	1	60	12.09	9.50	12.92	32
Audio recording devices	1	48	11.28	6.50	11.48	32
Videoconferencing systems (e.g., Polycom)	1	13	2.94	2.00	3.08	31
Interactive whiteboards (IWBs, e.g., SMART Board)	1	32	4.90	3.00	6.07	30
Classroom/audience response systems (e.g., clickers)	1	1000	120.63	60.00	225.99	24
E-book readers (e.g., Kindle, Nook)	1	64	9.68	5.50	13.68	22
Interactive learning centers (e.g., TouchTables)	1	10	2.54	2.00	2.60	13
Handheld videoconferencing devices (e.g., Dell Streak, webcams)	2	161	32.45	12.00	46.78	11
Gaming systems (e.g., Wii)	1	14	4.09	3.00	4.18	11
Personal digital assistant	50	—	—	—	—	1

Please specify any other tool(s) and how many of each are/will be available. N=30

Audio/Video	N=27
Lighting equipment	4 institutions, 1 to 10 units
Portable green screen	3 institutions, 1 to 6 units
AMP speaker (50 watts)	2 institutions, 5 units each
Digital camcorder	2 institutions, 3 to 30 units
Midi keyboards	2 institutions, 13 units
Tripod for cameras and camcorders	2 institutions, 10 to 22 units
AMP speaker stand	1 institution, 4 units
M-box mini	1 institution, 3 units
Digital wave recorder (amateur)	1 institution, 25 units
Video editing dubbing station	1 institution, 2 units
Digital audio recorder (professional)	1 institution, 2 units

Mixing board (audio)	1 institution, 2 units
Field mixer	1 institution, 1 unit
Mini DV deck	1 institution, 1 unit
Analog audio dubbing station	1 institution, 1 unit
Digital voice recorder	1 institution, 1 unit
Analog sound level meter	1 institution, 1 unit
Video converter	1 institution, 1 unit
<b>Accessories/Adapters</b>	<b>N=24</b>
Microphones	6 institutions, 3 to 37 units
Headphones	3 institutions, 16 to 60 units
Power cord/strip	2 institutions, 13 to 20 units
Computer headset w/microphone	1 institution, 20 units
Wireless keyboards	1 institution, 3 units
Digital converter box	1 institution, 1 unit
iPad SD card reader	1 institution, 3 units
iPad camera connector	1 institution, 3 units
Laptop to projector adapters	1 institution, 5 units
Accessory Bag (extra cables)	1 institution, 2 units
Security cables	1 institution, 26 units
Firewire (various types)	1 institution, 14 units
Remote controls	1 institution, 7 units
Laser pointer and power presenter (wireless)	1 institution, 12 units
USB extension cable	1 institution, 1 units
Network cable (CAT5)	1 institution, 1 units
<b>Monitors/Projectors</b>	<b>N=19</b>
Display monitors	9 institutions, 1 to dozens
Projectors	8 institutions, 2 to 25 units
Projection screen (6 foot diagonal)	1 institution, 4 units
Wall monitors	1 institution, 16 units
<b>Other Devices</b>	<b>N=19</b>
Digital cameras	9 institutions, 1 to 24 units
Wacom pen tablets/drawing tablets	3 institutions, 2 to 5 units
GPS devices	2 institutions, 4 to 12 units
Audio Player	1 institution, 6 units
SLR cameras	1 institution, 2 units
DVD/VCR	1 institution, 17 units

Wacom graphics pens	1 institution, 11 units
Portable DVD players	1 institution, 10 units
<b>Collaborative Spaces</b>	N=11
media:scape workstations	8 institutions, 1 to 20 units
Project lockers	1 institution, 60 units
Media viewing rooms	1 institution, 2 units
Skype room	1 institution, 1 unit
<b>Storage</b>	N=10
Memory card readers	3 institutions, 1 to 13 units
External hard drives	3 institution, 1 to 19 units
Flash drives	2 institutions, 4 to 25 units
Memory cards	1 institution, 13 units
Zip drive (no disk or cable)	1 institution, 1 unit
<b>Other Tools</b>	N=9
Scientific/graphing calculators	4 institutions, 4 to 18
Transcription kit	1 institution, 2 units
Skype kit	1 institution, 2 units
Portable microfiche reader	1 institution, 1 unit
Pocket weather meter	1 institution, 1 unit
Chess set	1 institution, 1 unit
<b>Scanners/Printers/Copiers</b>	N=5
Portable scanner	2 institutions, 1 to 2 units
Slide scanner	1 institution, 1 unit
Large scale poster plotter	1 institution, 1 unit
Polyvision CopyCam	1 institution, 1 unit

### Selected Comments

The library is also considering the purchase of Windows based tablets. Subject specialists are also investigating the possibility of providing a 3-D printing service for students and faculty. Subject librarians will meet with other departments on campus to discuss possible partnerships that might bring a 3-D printing service to the library.

[Our institution] is a very large de-centralized institution and I have not attempted to collect information from other units on campus that make these tools available to students.

## EQUIPMENT LOCATION

3. Please indicate where the tools are physically located in your library. Check all that apply. N=63

	Open User Area (e.g., reference, information commons)	Classroom or Lab	Group Study Room	Available for Checkout	Other Location	N
Non-interactive whiteboards	32	30	43	—	5	56
Laptops	5	8	—	37	4	45
Video recording devices (e.g., FlipVideo cameras)	5	2	2	36	6	42
Videoconferencing systems (e.g., Polycom)	3	17	14	—	14	40
Audio recording devices	4	4	2	30	5	37
Interactive whiteboards (IWBs, e.g., SMART Board)	9	20	14	—	6	36
Classroom/audience response systems (e.g., clickers)	4	18	1	9	8	35
Touchscreen tablet computers (e.g., iPads)	—	3	—	25	4	30
E-book readers (e.g., Kindle, Nook)	1	1	1	22	2	24
Handheld videoconferencing devices (e.g., Dell Streak, webcams)	1	1	2	9	7	17
Interactive learning centers (e.g., TouchTables)	9	2	1	—	6	14
Gaming systems (e.g., Wii)	4	1	—	5	3	12
Personal digital assistant	—	—	—	1	3	4
Number of Responses	43	49	50	54	25	63

If you selected "Other Location," please specify the tool and identify its location. N=22

Other technology, media, and computing labs	15
Conference rooms	7
Student unions	4
Exhibit area	1
Student dorm study rooms	1
Dean's office	1

## Selected Comments

A videoconferencing system (Skype) is available for faculty use in a conference room. Other tools (gaming systems and touch tables) are available through other campus facilities.
Clickers available through Center for New Designs in Learning and Scholarship.
Digital Union/Emerging Technology Center.
iPads are for checkout but also distributed as sets for classroom use. Usually for an entire semester.
Laptop: multimedia room. Videoconferencing systems: conference/training rooms.
Laptops are available for checkout through central Instructional Support Services ISS on campus. SMARTBoards are available in some classrooms, and some union and dorm study rooms.
Media Center, general Circulation desk.
Media technology center provides over 3,000 pieces of equipment including audio and video recording devices.
Multimedia Services of the Information Technology Services provides classroom support on campus and offers clicker and video recording hardware. The TECHB@R (operating in the library but organizationally part of Information Technology Services) provides laptops, iPads, power adapters, and HDMI connectors.
Polycom available for reserveable conference rooms.
Polycom available in the dean's office area.
Provided by our Academic Computing group within Information Technology.
Smart Boards: also in Cox Hall Computing Lab, Emory Center for Interactive Teaching (ECIT). White-boards: also in Cox Hall Computer Lab. Videoconferencing: also in Cox, ECIT. Interactive tables (media:scape): also in Cox. Personal digital assistant: ECIT provides assistance.
The Polycom is available in a conference room in the Business Library.
The touchtable is in an exhibit area of our special collections library.
There are multiple computer labs across campus. Some offer webcams. The College of Mass Communications and Media Arts checks out video and audio equipment to its students. Clickers are used by some instructors, but students must purchase their own device.
Videoconferencing and videoconferencing devices: A number of university Academic Media Services classrooms on campus.
Videoconferencing system is also available in a meeting room.
Videoconferencing system is also available in the Research Library's "Big" Conference Room.
Virtual Desktop Software available from virtual servers, following authentication.
Web cams are mounted on public services staff computers. Polycoms are located in the conference rooms.

#### 4. Does the library use any scheduling system to reserve any of these tools? N=62

<b>Yes</b>	46	74%
<b>No</b>	16	26%

5. If yes, please briefly describe the scheduling system (e.g., an online form within the library catalog, a web form, in-person requests, etc.) N=46

In-person request	20
Web form	19
Commercial or homegrown LMS	13
Web form through loan of library classroom or study room	12
Telephone	12
E-mail	10
Commercial software	5
Online calendar	3
Used only during library instruction	2

### Selected Comments

Because the interactive white boards will be located in group study rooms in our commons when it opens in Fall 2012, they will essentially be scheduled via our group study reservation system which is web-based.

Classrooms are reserved through a home-grown system called LMS. Group rooms are reserved via Outlook. Other items are checked-out via Voyager.

For the gaming consoles and the games themselves, we have placed records for them in the catalogue and students check them out like a reserve item for a set period of time. The videoconference systems are booked on our staff Exchange system.

Patron requests for equipment can be made via email; those requests are scheduled using an online, departmental calendar. Scheduling requests for additional resources and learning tools can be made through the campus Event Management System (EMS). The library and the Clough Undergraduate Learning Commons host four presentation studios. The presentation studios offer a variety of multimedia resources (projectors, recording equipment) that students and faculty may use for presentations. We have also discussed the prospect of using commercially available scheduling tools/software for the library's multimedia equipment.

The equipment does not require reservation but the group study rooms (technology rooms) in which some equipment is used do require reservations. Online web form used for requests and R25 room scheduling system.

PhPSchedule-it open source software on the library website.

Rooms with equipment (e.g., SmartBoard) and the Media:scapes are reserved via a web form or in person -- these are tracked in a special reservation system. Laptops are reserved in person but recorded in the library catalog system.

We have two online registration systems in place used to book rooms, which contain some of the technology/tools listed in this survey. Both are web forms, available on the websites of the sites that maintain the rooms/technology. Rooms can also be booked in-person and via phone. In addition, equipment that is checked out is 'registered' in some way. Many of these items are 'checked out' like a book, which means we scan the barcode on the item and the user's campus ID (also library card). Check out of more advanced/expensive equipment is logged in a different way (by the lending unit) and sometimes requires faculty sign-off.



We use a library-wide Oracle Calendar to schedule and reserve equipment.

We use a scheduling and circulation system called WebCheckout developed by OnShore Development.

## DECISION DRIVERS

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6. Please indicate the main drivers that influenced your library's decision to make these tools available to users. Check all that apply. N=62

User request	54	87%
Recommendation from a library committee/staff	52	84%
Collaboration with another unit/department in the institution	36	58%
Included as part of an information commons	34	55%
Ancillary benefit of another library initiative	13	21%
Included as part of a grant-funded program	11	18%
Provided/donated by a commercial vendor	3	5%
Other decision driver	19	31%

### Please specify the other decision driver. N=19

Best practices/trends	4
Student survey/input	3
Faculty or college collaboration	2
University/library initiative	2
Donations	2
Improved wireless coverage	2
Student Technology Fee	2
Library staff recommendation	2
Perceived university need	1
Encourage play and skills development	1
Review of student blogs	1
Outside consultants	1

### Selected Comments

Part of the library's proactive support for integrating media into the curriculum.

Video games recommended by a staff member as an experiment, noting that many language learners had posted information on blogs about their usefulness.

We brainstormed progressive tools and are making them available for students. We asked students what kind of tools

they would find useful, but they didn't know what to ask for. We will work with students closely moving forward. As part of the new construction project, we worked with a technology consultant, the Sextant Group, they advised on progressive tools such as the Tidebreak software and Magic Planet.

## USE POLICY

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### 7. Are the tools your library offers or plans to offer available to all library users or is their use restricted to certain categories of users? N=61

All tools are available to all users	17	28%
Use is restricted to certain categories of users	18	30%
Some tools are available to all users; other tools are restricted	26	43%

### Please briefly describe any restrictions on the use of these tools (e.g., user category, institutional affiliation, prior training, etc.) N=45

Institutional ID/current faculty, student or staff	36
Student Technology Fee or other grant specifically targeted to students	11
Faculty and graduate students with teaching assignments	9
Faculty and staff	6
Faculty	6
Library staff	6
Institutional ID and community users	4
Library classroom use	4
Specific college or unit	3
Students with faculty co-sign	2

### Selected Comments

All equipment is available to anyone with a valid ID.

Devices that check out are available only to students and are paid for by student tech fees.

If tools are funded by student fees, use is limited to students.

iPads only available for students and faculty in teaching seminars we offer.

Laptops are available to all campus users, but not public patrons; video conferencing is only available to students.

Media:scapes are available to all users, but can be reserved by faculty and graduate students. Laptops are available to users with university IDs. Classrooms (with Smartboards) can only be reserved by faculty and librarians.

Most equipment for checkout (laptops, flip video cameras) and study rooms/videoconferencing are restricted to use by students only. Non-interactive wipeboards not in study rooms are available to any user of the libraries. Currently, SMART

board technology is only available for teacher education students of the College of Education.

Most tools are available to all users. Some equipment requires training beforehand, some checkout equipment requires faculty sign-off (via email), so that use of equipment for class projects take priority.

The headphones are available to anyone. All other tools are only available to university faculty, staff, and students.

The interactive white boards in the commons will be limited to institutional affiliates only—enrolled students, faculty, and staff.

Video conferencing restricted to staff scheduling and use. Clickers also only used during librarian led sessions.

Video, audio, camera, and scanning equipment limited to faculty and graduate students; although another campus unit located within the library does lend this kind of equipment to undergraduates.

**8. Does your library require users to complete any training or registration process before using collaborative teaching and learning tools? N=61**

Yes, training is required	15	25%
Yes, registration is required	26	43%
Neither training nor registration is required	26	43%

**9. If training is required, please briefly describe the content and who provides the training. N=16**

Hands-on training by library staff	9
At checkout by library staff	6
Brief training on terms of agreement	3
Brief training on basic functionality	3
Online tutorials/modules	2 current, 1 planned
Not required but by request	2
Workshops	1

**Selected Comments**

At the time of checkout, staff members in media services provide required training in use of audio and video devices.

Brief ten-minute training in-person training required for use of video, audio, camera, and scanning equipment. Training conducted by member of Library's Digital Collections unit.

Employees provide overview of use policies and basic equipment operation. Online videos being planned.

For conference/training room and its equipment, training on "rules of the road" and general how-to's.

For some tools, there are no requirements. For others, registration is used to keep track of equipment, and some very specialized resources (recording studios, multimedia workrooms) require workshop attendance or training before use. Library staff provide this training.

Some items are hands-on training with staff member. We have used our student tech workers in the media center to create some online training modules that users need to complete before receiving the equipment.

Studio media production lab provides online and hands-on training for complex equipment such as video cameras.

Training is required for the more complicated equipment. New Media Center staff perform the training.

Video conferencing equipment requires support/training.

We don't require training, but we will usually meet with users prior to class or meeting to help setup and provide hands-on training/demos.

#### 10. If registration is required, please briefly describe the process. N=28

User agreement at checkout	15
Automatic registration at check out in library system or by web form at advanced booking	6
In-person registration with staff	4
Online agreement during reservation	1
Certification	1
Use of Event Management System	1

#### Selected Comments

Certification is required for some complex equipment.

Check out with student ID in library system (Voyager) as Reserves items.

Facilities are booked through a web form.

For certain products, such as iPads or Blackberries, staff must register with the appropriate IT or social media staff.

For laptop checkout, a laptop kit borrower agreement must be completed by the user. This agreement is kept on file.

For our laptops, users complete a User Agreement Form and the information is recorded in our Voyager system; the Kindles contain an online user registration form. None of the other tools requires registration. Use of the DMS requires registration.

Some tools and resources require the user to register through the campus EMS (Event Management) system.

Students who wish to check out laptops, MacBooks and iPads must complete and sign an agreement form every semester. They agree to certain responsibilities including how the equipment can be used and their financial obligation in the event of theft, loss, and/or late return.

## TRAINING AND TECHNICAL SUPPORT

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### 11. Who trains library staff to use and/or troubleshoot collaborative teaching and learning tools?

Check all that apply. N=58

Library staff other than IT/systems staff	47	81%
Library IT/systems staff	42	72%
Parent institution's IT/systems staff	16	28%
Commercial vendor	13	22%
Other person	7	12%

Please specify the other person. N=7

AV Library staff.

Certain products, such as iPads and videoconferencing are handled by NARA staff. Some products, such as Blackberries, are handled by IT staff.

College IT staff.

In some libraries, staff are trained by their LSPs (Local Support Partners), but many are trained by "super users" in their area.

It depends. Most troubleshooting is done and documentation developed by front-line staff. When necessary, IT staff will help resolve technical problems. We intentionally wanted equipment and systems that were readily usable and wouldn't require staff help.

New Media Center staff are Library employees. They instruct themselves and each other on how to use new equipment.

Subject librarians teach a variety of multimedia classes that are open to students and staff members.

### 12. Who provides technical support to library users? Check all that apply. N=61

Library staff other than IT/systems staff	47	77%
Library IT/systems staff	40	66%
Parent institution's IT/systems staff	17	28%
Commercial vendor	4	7%
Other person	4	7%

Please specify the other person. N=4

AV Library staff.

College IT staff.

For our Information Commons we also have campus IT staff assisting our users during many hours of operation.

Students (trained work study students).

13. Who performs maintenance and repair for the collaborative teaching and learning tools? Check all that apply. N=61

Library IT/systems staff	49	80%
Library staff other than IT/systems staff	30	49%
Parent institution's IT/systems staff	26	43%
Commercial vendor	17	28%
Other person	5	8%

Please specify the other person. N=5

AV Library staff, IT staff, plus maintenance agreements.

Classroom Support Services provides some support for projectors.

College IT staff.

Out source.

Varies. Sometimes campus IT staff and sometimes library staff. Often these are under maintenance/repair contracts.

## FINANCIAL SUPPORT

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14. How was the initial purchase of the collaborative teaching and learning tools funded? Check all that apply. N=62

General library budget	53	86%
Library's IT/systems budget	31	50%
Parent institution's IT/systems budget	21	34%
Student technology fees	20	32%
Grant funding	13	21%
Public/private partnership	6	10%
Other funding source	19	31%

Please specify the other funding source. N=19

Donations/donor funds	7
Other institutional departments	4
Endowment funds	3
Renovation/construction funds	3
Funding from library fines and fees	1



### Selected Comments

Donation for iPads. Library underwent a huge 2.7 million dollar renovation so interactive whiteboards part of that budget.

Donation from campus athletics department.

Endowment for learning spaces.

In partnership with office of undergraduate education.

New construction funding and Student's Union Grant funding.

Parent institution's design office.

We have discussed using collection development funds for future purchases of e-readers & iPads.

### 15. Please enter any additional comments you have about the initial funding of these tools. N=2

Laptops and netbooks at one location were made available with funds from a credit union that wanted to make a donation. The library identified laptops/netbooks as a resource to fund.

Some purchases have been collaborations between the libraries and the colleges with shared funding with student technology fees.

### 16. How is ongoing maintenance and replacement of the collaborative teaching and learning tools funded? Check all that apply. N=60

General library budget	50	83%
Library's IT/systems budget	33	55%
Student technology fees	15	25%
Parent institution's IT/systems budget	12	20%
Grant funding	4	7%
Public/private partnership	—	—
Other funding source	11	18%

### Please specify the other funding source. N=11

Donations/donor funds	2
Other institutional departments	2
Endowment funds	2
Fines and fees	2
Renovation/construction funds	1

## Selected Comments

Friends of the Library.

Income generated through our Distance Learning Library Services program.

Overdue fines and replacement costs charged for overdue/lost electronic items.

Some maintenance is funded through the university's IT budget.

Some of the products, particularly the Tidebreak TeamSpot software is gaining popularity across campus. We hope the university will support a campus-wide license.

17. If the library charges a fee for the use of any of the collaborative teaching and learning tools, please briefly describe which tools have use fees, the type of fee (e.g., per item, amount of time it is used, etc.), and the fee amount. N=4

All rooms and equipment are available to all university affiliates (staff, students and faculty) for no fee. Some rooms/equipment are available to those not affiliated with the university for a fee, according to [a set] schedule.

Late fees are charged on laptops. Fines for late return are \$20/hour to a maximum of \$200.

Some equipment is purchased through fines and replacement charges, but is not a line item funding source.

We only charge overdue fines of \$5 an hour for equipment and \$1 an hour for accessories.

## PUBLICITY

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18. How does the library publicize the availability of collaborative teaching and learning tools? Check all that apply. N=62

Word of mouth	59	95%
Library website	56	90%
Mentioned in library classes and tours	54	87%
Signs and flyers	42	68%
Social networking sites (e.g., Facebook, Twitter, YouTube, etc.)	40	65%
Email communications	30	48%
Library newsletters	29	47%
Campus newspaper	16	26%
Other publicity method	13	21%

Please describe the other publicity method. N=13

Digital signage, e.g., slides, screen savers	7
Librarian/liaison outreach	3
Institutional website	2

Selected Comments

Digital signage and screen-savers used on computer workstations in learning commons.

Liaison outreach to potential faculty adopters.

Slide show in the lobbies/entry areas of each of the libraries.

Student Technology Fee website and information they make available to students.

We haven't started our marketing initiatives yet, but we hope soon.

## EVALUATION

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19. What techniques/strategies does the library use to assess the success of offering the collaborative teaching and learning tools? Check all that apply. N=61

Informal user feedback	57	93%
Track the number of uses of each tool	55	90%
Track the number of requests for each tool	24	39%
Track the number of technical support requests for each tool	16	26%
Through formal surveys of users	26	43%
Other evaluation technique	13	21%

Please specify the other evaluation technique. N=13

Focus groups	3
Faculty surveys	2
Observation	2

Selected Comments

Counting Opinions Surveys.

Not every tool is formally assessed, e.g., whiteboards.

Recently established an Assessment Librarian position, charged with evaluating all library services, including support for

collaborative teaching and learning.

Track the number of turn aways for each tool (i.e., a student wants to check out a laptop but all laptops are checked out).

We are not evaluating yet, but we hope to track number of uses and user feedback very soon.

We do some of these things but only the annual user survey is used for evaluation purposes.

## **BENEFITS**

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20. Please list up to three benefits of providing collaborative teaching and learning tools to library users. N=58

### **Supports a collaborative teaching and learning environment N=37**

Allows for engaging and interactive information literacy education.

Contribution to student success.

Directly supports emerging trends in higher education.

Enables our patrons to collaborate more effectively within existing collaboration spaces.

Encourages innovation in the classroom.

Enhances the teaching and research capabilities of our faculty.

Facilitates collaboration and interaction.

Fosters team work and creativity among students.

Group projects are improved in quality and students are more engaged in them.

Group study rooms and whiteboards are in very high demand as assignments are increasingly collaborative.

Improved teaching and learning environment.

Increased student and faculty use of library for meetings and teaching sessions.

It is another way the library adds to the university's teaching mission.

It provides students with options for doing collaborative work.

Partnerships with faculty.

Promotes team learning.

Provides many of the tools they need to produce multimedia projects for their classes.

Provides students with tools for informal group learning and tutoring.

Support educational needs of campus.

Support the changing needs of teaching, learning and research.

Supports a combination of media and information literacy that involves many campus collaborators.

Supports campus initiative to include use of media in classroom instruction and student assignments.

Supports course integrated media assignments.

Supports faculty and student teaching and learning.

Supports faculty with many of the tools they need for their teaching.

Supports important part of student learning.

Supports more creative approaches to teaching and learning.

Supports our faculty's teaching style.

Supports teaching and learning at the university.

Supports/promotes students' research and collaboration skills.

Technological tools of this kind are often crucial to teaching methods and to specific academic expectations.

The installation of interactive whiteboards in group study rooms greatly enhances student collaborative work.

The library is providing devices that contribute to student learning.

The opportunity to display, share, or exhibit work with others.

To facilitate group study and research.

Users are provided with tools that support their assignments and learning styles in a comfortable and safe environment.

White boards and plasma monitors in group study rooms allow collaborative study.

### **Good publicity and outreach N=28**

Allows us to reach people who might not normally visit [the library].

Brings students and faculty into our space.

Brings users to the library.

Broadens the identity of the library on campus.

Building community with library users.

Fulfills a user need, thus providing good PR.

Good marketing for the library as a technologically relevant place.

Helping to see libraries as beyond books.

Illustrates to the campus the diversity of activities the Library is equipped to support.

Improve image of the library by providing collaborative spaces/tools.

Increase number of patrons using the library.

Increased use of the library.

Increases the sense of the Library as “place” instead of just a facility to use a computer or check out a book.

It brings students into the library.

It makes the library a learning destination.

It’s additional draw to bring people into the library.

Makes us seem up to date, cool.

Making the library highly visible to current and potential users.

Many students come to check out a device and discover to other services and collections.

More traffic into library as instructors use new classroom spaces.

Not providing access to these tools would necessitate that they go elsewhere.

Promotes library’s role in supporting community’s collaboration and technology needs.

See library as a location for collaboration.

Students (in particular) realize that the library doesn’t just house books.

Students appreciate that the library offers more than just books to our patrons.

Students come to the library to use these teaching and learning tools.

These resources bring more people into the library and one of several ways that the library demonstrates it is relevant to student success.

We are an innovation centre on campus.

### **Increases access to new technology N=19**

Access to technology for at-risk students.

Allow members of community to experiment with some new technologies.

Encourage experimentation and innovation in use of technology.

Evens the playing field for economically disadvantaged students.

Exposure to the technology.

For a number of our students, provides access to tools they could not afford on their own.

Having these tools around means they are also available to library staff.

Increased awareness of capabilities of tools.

Introduces library users to new technologies.

Learners engage with new technologies.

Many of our students would not have personal access to collaborative teaching and learning tools we provide to them.

Provide a forum for the introduction of and experimentation with new technologies for library staff, students and faculty.



Provide patrons opportunities for exploration and practice using new technologies.

Removes cost barrier for entry to experimentation.

Students and instructors can experiment with new tools.

Students can test out new technologies like the Kindle and iPad.

The library is the only source of these tools for some students.

The opportunity to encounter and use new forms of technology for the first time.

We provide opportunities for use of these tools not available anywhere else on campus.

#### **Provides skill development for users N=14**

Access to technology for workplace skill development.

Allows staff to be abreast of the latest technology.

Closely tied to various kinds of longer run academic and professional success, within a 21st century knowledge discovery environment.

Creates opportunities for Library staff to assist students, staff and faculty in the new ways they now use, manipulate, analyze and share information.

E-readers & tablet computers raise levels of student technology skills.

Helps students academically and improves their skills for future entrance into the work force.

Library faculty and staff get familiar with these technologies as well.

Opportunity for students to use materials they will encounter in their post-educational work lives.

Prepares students for the workplace.

Provides students with valuable skill-sets that will make their resumes and grad school applications more competitive.

Provides users with practical experience in using the types of technologies and work methods utilized by employers.

Students can gain skills in technology and collaboration.

Students gain experience in technology-mediated collaboration.

We experiment in order to do what we do even better, making us campus experts.

#### **Provides convenience and flexibility N=13**

Allows for better support of distance and online learning activities.

Allows instructors to take lessons beyond the traditional classroom setting.

Allows library staff to connect with remote users.

Check-out laptops let students take a laptop to class without having to carry one to campus.

Convenient location for users to check out the tools in the library.

Extends learning beyond the classroom.

Laptops provide flexibility for meeting location—not restricted to formal computer classrooms.

Offers flexibility to instructors and students.

Provides flexibility.

Researchers have the ability to perform assignments and use a computer at any physical point in the library.

Some don't own a laptop, users like flexibility of a laptop.

Some students choose not to bring their own laptops - convenient.

They appreciate not always having to lug around their own laptops.

### **Enhances experience and service of users N=12**

Allows users to make the best use of space.

An enhanced student instructional experience.

Brings students in to the library and provides an opportunity for them to be exposed to other services and information resources.

Contributes to enhancing educational outcomes.

Creates a more dynamic and interactive classroom environment for library instruction.

Improved learning space and higher satisfaction of services.

Improved patron services.

Providing a space with useful equipment for library users to meet and collaborate.

Providing these tools helps students have better success.

Students benefit from flow from formal classroom instruction to group spaces to individual study spaces.

The opportunity to create new kinds of assignments, productive collaborative experiences.

Users of the research commons stay in the library, on average, 3 times longer than those who use other library spaces.

### **Satisfies user needs N=11**

Ability to support educational needs.

Allows us to 'go where the customers are' and provide the services our constituents expect.

Availability of laptops for check out makes up for the fact that there are never enough workstations available for the students.

Better meet student learning needs in 21st century.

Desire to give students stuff to play with.

Laptops continue to be extremely popular despite growing percentage of students owning their own.

Meets long-standing requests for this type of equipment by users.

Meets the needs of users.

More tools means more use.

Other units on campus have an outlet to satisfy student needs.

The tools support the way students and researchers want and need to work.

### **Keeps libraries relevant, up-to-date N=5**

Helps the library remain a relevant and desired destination.

Helps us keep up with the technologies our patrons are using.

Increasing the relevance of the library to students' lives and to the ways they learn.

Provided opportunity for library to be involved in research done on video games and language learning.

Seeing how our patrons use these tools helps us prepare for future services.

## **CHALLENGES**

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21. Please list up to three challenges of providing collaborative teaching and learning tools to library users. N=58

### **Costs/ Funding N=40**

Cost (4 responses)

Funding (4 responses)

Affording best tools and features for our users.

Balancing costs against budget for more traditional library materials (e.g., books).

Budgeting for continued access to the newest technology.

Buying apps.

Check-out laptops are easily damaged and expensive to repair.

Cost of maintaining devices.

Cost of maintaining equipment.

Cost of replacing equipment.

Cost of updating devices at a respectable rate.

Costs, particularly in maintenance for tools with heavy wear-and-tear.

Even free apps require having a credit card on file.

Expense.

Funding for staff support to assist with the tools.

Funding for the tools.

Funding to stay current, purchase new tools, etc.

Funding to support the purchase, staff maintenance, and ongoing replacement of technology tools.

Funds to maintain equipment / account for depreciation are not always forthcoming.

Having a reliable budget for renewing and maintaining equipment.

Having sufficient funding to purchase all the devices we would like to have.

High cost of installation and maintenance.

Initial funding.

Loss and replacement costs.

Maintaining ongoing funding for updating the collection of tools.

Money to purchase.

Ongoing costs.

Our resources (staff, money, equipment) are fairly constrained.

Recurring cost of acquiring new equipment.

Recurring funding.

Selecting hardware and software on a limited budget

Staffing the check-out counter for laptops is expensive.

These ventures tend to be expensive, and funding is extremely difficult to come by.

We debated whether the e-readers are an appropriate use of collection development money.

### **Keeping up with Technology (Obsolescence) N=22**

Keeping up with the technology. (2 responses)

Being aware of new versions or evolutions in teaching and learning technologies.

Evaluating new ones.

How often do we need to replace our laptop fleet?

iPads are challenging to keep updated.

Keeping abreast of rapidly changing technology.

Keeping current versions.

Keeping technology up-to-date and working properly.

Keeping up with new developments.

Keeping up with rapidly changing technologies.

Keeping up-to-date.

Older equipment becomes obsolete.

Picking the right technology to invest in, since gadgets can change very quickly.

Rapid changes in technology can sometimes make effective evaluation difficult.

Rapidly changing technology.

Replacing equipment with new version on a regular basis.

Some technologies are on their way towards obsolescence by the time a service for them is launched.

Staying up-to-date is a constant challenge.

The equipment becomes outdated relatively quickly.

Things change so quickly, deciding where to invest is a challenge.

Tools become obsolescent.

### **Training N=19**

Training. (2 responses)

... adds a level of complexity for library staff and requires more staff training.

Collaborative teaching and learning tools sometimes require a steep learning curve.

Complexity of the technology requiring staff with specialized skills.

Keeping staff up to date on tools as they change.

Learning curve for library staff to learn and master certain equipment.

Learning curve for students and staff.

Maintaining staff skills in using and repairing devices.

Needs for training of students/faculty.

Staff training / skills to support the use of those tools.

Staff training and staff capacity to support these tools and services.

Staff training in the use of these tools.

Staff training.

Training can be difficult.

Training for faculty and staff in learning these technologies.

Training Library staff on new skills and changing culture to accept rapid pace of change.

Training of staff and users.

Training staff to be able to support new types of technology.

### **Maintenance N=16**

Maintenance. (3 responses)

Ongoing maintenance. (3 responses)

Equipment can break or malfunction.

For the laptops the biggest challenge is maintenance.

Keeping the tools up-to-date and well maintained.

Keeping tools in good repair.

Maintaining a large variety of equipment.

Maintenance and upkeep are additional challenges.

Maintenance and upkeep.

Maintenance of multiple devices and platforms.

Software and hardware maintenance.

Upkeep and maintenance of tools.

### **Technical support N=11**

Technical support. (3 responses)

Difficulty in supporting combination of university-owned and student-owned equipment.

Getting someone qualified to repair the video cameras and still cameras.

How to provide technology support and content/reference support at point of need.

Library IT support for tools that often fall outside the profile of equipment routinely supported.

Responsibility for troubleshooting devices.

Support staffing.

Users not always sure how to use the technology.

We find ourselves providing support/training for the use of technology tools.

### **Public Relations N=8**

Balancing promotion of use with available devices.

Communication between partners is essential and any breakdown can negatively impact services and user experiences.

Convincing Department heads it is really worth doing.

Funding them at a public university can be tricky.

Getting the word out about available equipment.

Instructors are not always supportive or interested in their students using these resources.

Publicizing what we have is a challenge.

Some faculty and staff (including library staff) do not understand why the library is involved in providing these tools to users.

### **Staff Workload N=8**

Collaborative tools require staff to handle the troubleshooting. This can be very time consuming.

Introducing, teaching and supporting use of these products are resource intensive.

Limited staff time to learn to use equipment and help users learn to use it.

Making time to learn to use them ourselves.

Managing more expensive technologies [while] reference librarian/staff presence is being reduced.

Managing the circulation of such items and their return.

Must maintain a bigger workload with the same number of hours in a day.

Staff time involved in maintenance of various devices.

### **Space Needs N=6**

Creating spaces for users to be able to use collaborative tools.

How to facilitate, staff the space.

Identifying infrastructure, technology and furniture to satisfy a variety of applications.

It's hard to carve out space for group rooms in the current footprint of our buildings.

Space to house the students using the devices.

They challenge users' and librarians' traditional definitions of libraries as quiet, study spaces.

### **Keeping up with User Demand N=4**

Balancing a variety of equipment with availability of high-use equipment.

Having enough equipment especially during peak times.

Keeping up with user demand and expectations.

Often "crunch" time of semester where demand exceeds equipment.

### **Security N=4**

Coordination between library needs and the parent institution's IT security measures.

How to best physically secure items which need to be charged.

Things get broken (sometimes stolen).

When tools are lost/stolen.

### **Development of Policies/Procedures N=3**

Establishing device and procedural standards campus-wide.

Inordinate amount of time and effort to develop policies and procedures around new tools and services.

Very difficult to systemize and scale initiatives.

### **Scheduling N=3**

Availability of scheduling and circulation system.

Prioritize library classes over other campus classes desiring to use the library instruction classrooms.

Students frustrated when not able to access rooms when they need them.

### **Copyright/Licensing**

Licensing and copyright and DRM.

### **Privacy**

Many of these tools are designed to be collaborative but not shared.

## **ADDITIONAL COMMENTS**

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22. Please submit any additional information regarding collaborative teaching and learning tools at your institution that may assist the authors in accurately analyzing the results of the survey. N=14

### **Selected Comments from Respondents**

We don't use clickers in library classrooms because we use ABTutor polling or polleverywhere. Instructor's computers and many librarian computers have Camtasia Relay to record screens and audio. Formal and informal learning spaces have modular and mobile furniture, which we find as significant as devices.

Each Collaborative Technology Lab has instructions on how to use the equipment.

I know that reference librarians have had discussions about bringing in equipment like iPads and ebook readers. I expect that the acquisition of some of these learning tools will be considered over time.

Institutions that utilize collaborative teaching tools must be prepared to continually assess user needs; libraries must also keep pace with the evolving technology to keep from falling behind. Institutions that do not stay current with the



technology run the risk of failing to meet user demands and expectations.

Many of our collaborative learning tools are in our Interactive Media Center. Software plays just as large, if not larger, role in collaborative teaching and learning.

Strong collaboration in this area with the Dartmouth Center for the Advancement of Learning. Along with the Writing and Rhetoric Program and, to some extent, the academic computing department.

The survey seems to indicate that the library offers the service if it is in the library. However, for many information commons, IT services are provided by university/college IT services. While our TECHB@R is right next to the library's reference desk, and uses our library systems to check out equipment, they are administratively run by another group and cooperatively work with us. Some of the questions imply that the library or IT only, not both.

We anticipate an increase in the availability of these kinds of tools in the library as the library transforms its spaces to better support more collaborative approaches to teaching and learning.

We are in the very early stages of considering collaborative teaching and learning tools, too early to answer any of these questions.

We began our laptop circulation program in fall 2002 with approximately 50 laptops. In spite of rolling out many innovative programs since then, it continues to be one of our most popular and most appreciated services.

We have also introduced touch screens and red/green lights to the outside of each student workroom so students can see if the room is available, and book it on the spot using the touch screen.

We have over 2000 pieces of equipment from a \$3500 video camera to \$3 audio adapters. Some of our kits have 15 pieces that include chargers, cables, batteries, filters, etc. Over the last 10 years that we've been growing to serve the needs of our community we've developed extensive policies and procedures.

We recently replaced our circulating laptops with netbooks. Given the lower price of the netbooks, we were able to increase the number we are offering our users.

We're still fledglings in this effort. We are currently concentrating on providing these tools to library staff in order to help them become familiar and up-to-speed on their usage before making them more widely available to our library users. These responses mainly relate to the Smithsonian Natural History Library, which has specifically been designed for collaboration and training.

## RESPONDING INSTITUTIONS

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University at Albany, SUNY  
University of Alberta  
Arizona State University  
Brigham Young University  
University of British Columbia  
University of Calgary  
University of California, Irvine  
University of California, Los Angeles  
University of California, San Diego  
University of Chicago  
University of Cincinnati  
University of Colorado at Boulder  
University of Connecticut  
Dartmouth College  
Emory University  
University of Florida  
Georgetown University  
University of Georgia  
Georgia Institute of Technology  
University of Illinois at Urbana-Champaign  
Indiana University Bloomington  
Iowa State University  
Johns Hopkins University  
University of Kansas  
Kent State University  
University of Kentucky  
Louisiana State University  
University of Louisville  
University of Manitoba  
University of Maryland  
Massachusetts Institute of Technology  
University of Miami  
University of Michigan  
Michigan State University  
University of Minnesota  
Université de Montréal  
National Archives and Records Administration  
University of Nebraska—Lincoln  
University of New Mexico  
University of North Carolina at Chapel Hill  
North Carolina State University  
Northwestern University  
Ohio University  
Ohio State University  
Oklahoma State University  
Pennsylvania State University  
Purdue University  
University of Rochester  
Rutgers University  
Smithsonian Institution  
Southern Illinois University Carbondale  
Syracuse University  
Temple University  
University of Tennessee  
Texas Tech University  
University of Virginia  
University of Washington  
Washington State University  
University of Western Ontario  
Yale University  
York University