



## Technology On Demand: Implementing Loanable Technology Services

Journal:	<i>Library Hi Tech</i>
Manuscript ID:	LHT-11-2010-0119
Manuscript Type:	Original Article
Keywords:	Academic libraries, Loanable technology, Technology, Lending services, Library services, Multimedia

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Review

## Technology on Demand: Implementing Loanable Technology Services

### Introduction

In their 2004 article, *Born with the Chip*, Abram and Luther wrote that incoming college students “will profoundly impact both library service and culture.” They remarked that the new generation of college students entering academia have experiences and expectations that differ significantly from prior populations. These students require a range of digital tools that are configurable to immediate needs and hold the most relevance to the digital world they inhabit. They are often required to present projects that include material in a format other than a word document. Likewise, faculty increasingly expect multimodal projects that incorporate students’ research.

Yet it is rarely feasible for each campus department to acquire all of the technology needed to support those efforts or to require that each student purchase the equipment. Libraries are uniquely situated to meet this expanded need for tools to aid content creation in addition to content retrieval and consumption through programs which purchase and loan out digital-use devices and other technology. Developing in-house loanable technology has significant impacts on a variety of library public and technical services, including a library’s space use and allocation, cataloging and processing, and staff training. This article provides an overview of the loanable technology program at one academic library, including results from two sets of assessments that show the challenges, successes, and recommendations, especially focusing on the selection, processing, cataloging, circulation, maintenance, and promotion of the equipment.

The loanable technology program described in this study began as an outgrowth of a 2005 formal review exploring the creation of a “learning commons” space in the library, and supplemented by funding provided by the Division of Intercollegiate Athletics (DIA) to create a

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3 more robust undergraduate student space. The planning process included surveys, focus groups,  
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5 informal interviews and campus conversations with stakeholders to gather information on  
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7 student needs (in particular technology needs) not being met with current resources. Analysis of  
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9 the data led to the implementation of several new services and changes to existing services (as  
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11 detailed below), including a restructuring of collections, spaces, and services in the  
12  
13 Undergraduate Library, and the establishment of a loanable technology program.  
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17 Laptops and digital cameras formed the core of the initial loanable technology collection,  
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19 which grew over time in response to assessment, student assignments, curricular changes,  
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21 student requests, and other technology initiatives at the library, as detailed below. Today, the  
22  
23 loanable technology collection includes a variety of items from laptops, to cameras, to USB  
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25 drives, to digital audio and video recorders, to graphing/scientific calculators, to portable gaming  
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27 devices like the Nintendo DS and Sony PSP.  
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### 32 33 34 **Review of the literature**

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36 Although an increasing number of libraries provide laptop checkout and other loanable  
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38 equipment, there is not a lot in the literature documenting the processes, experiences or  
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40 assessments of these programs. Some articles provide a justification for loaning equipment,  
41  
42 such as King (2010), who explains how community colleges can reinvent themselves in order to  
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44 provide needed services and resources. She discusses the need for libraries to not only increase  
45  
46 the availability of all types of digital content to student devices, but also to redirect funds in order  
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48 to purchase digital devices to loan out to students, an important step especially for increasing  
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50 equity among students who cannot afford the devices.  
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3 Much of the literature related to loanable technology addresses the experiences of loaning  
4 laptops at libraries, including the planning, policies, and considerations (Vaughn & Burnes, 2002;  
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6 Allmang, 2003; Drew, 2003; Kwon and Soules, 2003; Williams, 2003; Dodd, 2007; Power  
7  
8 2007). Sharpe (2009) details the challenges of loaning laptops at the University of Houston's  
9  
10 Anderson Library. In addition to providing the process for preparing laptops for checkout,  
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12 Sharpe shares adjustments to the checkout policy due to the workflow difficulties that were  
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14 encountered at the desk, strategies for meeting the challenge of keeping up with charging  
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16 batteries, and deterioration of the machines.  
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22 Although there are some articles that discuss methods used to assess considerations  
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24 before implementing a program (Changchit et al, 2006; Elwood et al, 2006) only a few articles  
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26 provide the assessment of their program and changes made as a result (Holden & Deng, 2005;  
27  
28 Atlas et al, 2007; Feldman et al, 2008; Hsieh & Holden, 2008). Many other articles provide  
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30 circulation and usage statistics that justify the popularity of the program. Feldman et al (2008)  
31  
32 were able to find survey results on a few library websites regarding that library's loanable laptop  
33  
34 program.. After their own literature review, they made the conclusion that users were pleased  
35  
36 with laptop programs, yet their institution had received numerous complaints due to lost data,  
37  
38 slowness and connections. They conducted a user satisfaction survey to learn of reasons for  
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40 checking out a laptop, wait time for a laptop, time of day they used the laptop, how often they  
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42 check out a laptop, problems they experienced, malfunctioning laptops, satisfaction with service  
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44 and options for additional comments. As a result of the survey they were able to identify use  
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46 patterns and key areas that needed to be improved. They provide each of the areas and solutions,  
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48 such as adding in more wireless access nodes, contracting with a repair service, adding more  
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50 laptops, and imaging solutions.  
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3 Hsieh & Holden (2008) conducted two web-based surveys to evaluate the needs and  
4 expectations that students had for the laptop lending service. They detail the history of their  
5 program and the reasons to assess the program. They also describe the difficulty in finding  
6 published literature related to the assessment of a laptop lending program. The surveys  
7 conducted by Hsieh & Holden occurred in 2005 and 2007, with the later survey having some  
8 refinement of questions with more context sensitive questions. Although the survey provided  
9 information related to why students use laptops and satisfaction levels, one of the important  
10 findings was that students did not use the laptops because they were not aware of them, which  
11 prompted the library to improve their marketing of the laptops.  
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25 When searching for published articles that also provide information about loanable  
26 technology in addition to laptops, there are even fewer. Munson & Malia (2007) include some of  
27 the loanable equipment and packaging for it in their article, but the main focus of the article  
28 concerns details and changes their laptop lending program underwent, including number of  
29 laptops, loan period changes, space considerations, and difficulties with software and hardware  
30 for the laptops. They also detail their funding, security changes, procedures when an item is  
31 damaged, and their fine structure.  
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41 The inclusion of loanable technology in an academic library should also reflect the  
42 institution's curriculum and support its courses. A search of the literature for information from  
43 that perspective is also limited. Numerous authors (Covington, 2004; Manness, 2004;  
44 Martinson, 2004; Jenkins et al, 2006) discuss the need for instruction that addresses the role of  
45 media literacy as students both use and produce materials in multimodal formats.  
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## Methodology

A variety of observations, surveys, conversations with faculty and students, focus group interviews and investigation of technology needed for class work were made to determine the technology that would be appropriate to make available to students. The materials themselves were purchased in stages to first meet the most important student academic needs expressed in the assessment results.

### *Focus groups*

In 2005 eight focus groups were conducted with students to get their feedback on what they wanted to see happen in the library (and a possible “learning commons” space) and to learn what tools they needed in order to accomplish their class projects. Groups who were contacted to be part of this were students from: Liberal Arts and Sciences Colleges, the Career Center Student Advisory Group, Housing/residence halls, students who were in the Undergraduate Library, the Student Union, CITES (Campus Information Technologies and Educational Services) Student Instructional Technology Advisory Board (SITAB), and the ULSAC (University Librarian Student Advisory Committee).

Four of the focus groups occurred in the library and four occurred outside of the library, at common areas of some of the residence halls. The goal was to hear from students who currently used the library and those who did not in order to get the widest perspectives and feedback about what services they would like to see in the space, as well as their ideas for design. Snacks were provided for those who participated at the Undergraduate library and pizza and soda were provided for meetings outside the library. The break down for the groups was as follows:

- Liberal Arts and Sciences, 9 students

- the Career Center Student Advisory Group, 6 students
- two groups from Housing, 6 students, 9 students
- students in the library, 7 students
- students in the Student Union, 6 students
- CITES SITAB 9 students
- ULSAC

Two individuals were present to oversee the focus groups: a librarian who took notes and displayed them on a large screen so the group could see what was said and an individual not affiliated with the library who conducted the focus group. Although subsequent questions were discussed, two initial questions related to technology included:

- What services would you want to be provided in a learning commons space in the library?
- What technologies would you want to be provided in a learning commons space in the library?

These were expanded on as the sessions progressed to get into more specifics in what students needed in the form of technologies, how they envisioned using them, and the support they would expect for their use at the library.

#### *Web page survey*

To get broader input from faculty and students around the campus, an anonymous web survey was developed and disseminated through the campus weekly announcement list. As an incentive for answering the survey, five individuals were randomly chosen to receive \$20.00 gift certificates. In order to be entered in the drawing they had to provide an e-mail address.

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3 The survey consisted of sixteen questions. A total of 624 surveys were completed and  
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5 returned. Of the sixteen questions the following specifically pertained to technology:  
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- 10 • What additional services would you use if they were included in the library's  
11 "Learning Commons"?
- 12
- 13 • What software do you need for your studies (or request students use)? (Check as  
14 many as apply)
- 15
- 16 • Do you ever ask for software assistance from the consultants in the CITES Labs?  
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- 18 • Do you work in a group for your studies (or require that students work on group  
19 projects)?
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- 21 • Do you bring your own laptop to the library for your work?  
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### 32 *Informal interviews with faculty members*

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34 As part of the learning commons development process, faculty members from throughout the  
35 campus were consulted to learn ways the library could support students in their coursework.  
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37 These conversations occurred through group meetings and through individual conversations.  
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39 The main themes discussed were technology needed, partnerships that could be developed with a  
40 presence in the learning commons, types of spaces needed and the development of a robust  
41 online presence that pulls together all the technology and library services from throughout the  
42 campus.  
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## Findings

### *Focus groups*

Results from the eight focus groups were fairly consistent regarding technology that students wanted to either have within the permanent configuration of the library or that could be loaned out. Highly desired items included the following categories:

Group study rooms. Students detailed the characteristics desired for these rooms, including a marker board, smart board, some sort of computer projection and a table that would seat at least four people. Although they advocated for a permanent computer in those spaces, they felt that if there were adequate wireless and electrical outlets, as well as a way to have the laptop project on a screen that would be ok. Purposes for these rooms included for group study, TA office hour use, and student presentation practice space. Along with this discussion, students commented on the need for large screen computers for group work.

Laptops to check out. Students were even willing to put down a deposit in exchange for checking out a laptop for building use. More wireless capability and electrical outlets were also high on the list of upgrades that needed to occur in order to accommodate all the new technology.

Media editing equipment. Although students didn't necessarily indicate that they wanted Macs because of the specialized software available, they did mention the various productivity and media editing software (mostly only available on Macs at the time) that they needed in order to produce and edit video, incorporate sound elements, and to create dynamic presentations.

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6 Digital cameras and scanners to check out. Although the library had some scanners, they were  
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8 attached to computers and students were reluctant to ask someone at one of those stations if they  
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10 were almost finished so that they could use the scanner. Along with cameras and scanners to  
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12 check out, students wanted to make sure that the library provided software on the library  
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14 computers, and necessary cables that would allow them to work with these tools.  
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20 Mp3 players, digital recorders, and iPods. For most, the desire for the library to loan these items  
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22 was not for the purpose of listening to music. Rather, students mentioned that these would be  
23  
24 useful for them to download lectures that were on e-reserves or available from faculty course  
25  
26 sites, as well as CDs that accompany textbooks. Additionally, students mentioned how they use  
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28 them as digital recorders (e.g. for journalism classes). They also mentioned how these devices  
29  
30 were useful for downloading clips (sound clips, speeches, open source music, etc.) that they  
31  
32 could then add to presentations.  
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### 36 37 38 *Web survey*

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41 Demographics. The breakdown of participants is provided in Table 1 below. Of the respondents  
42  
43 72% were undergraduates. Although the learning commons is heavily used by undergraduate  
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45 students, the web survey sought responses from faculty and graduate students as well in order to  
46  
47 learn of their aspirations for the space, services and technologies. Question 2 asked students to  
48  
49 identify their majors. There were 518 responses, with nearly 200 majors named, with a  
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51 preponderance in the arts and humanities.  
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Table 1: Question 1- Please identify your academic status

Year in School	Number	% of total (n=624)
First year student	250	40%
Sophomore	58	9%
Junior	70	11%
Senior	73	12%
Graduate student	127	20%
Faculty	16	3%
Staff	24	4%
Other	6	1%

Responses from questions pertaining to technology. Several of the questions on the survey provided options that could be selected, as well as write in options. Although the main purpose of the survey was not just technology related, there were options provided in some of the questions that had direct connections to the type of technology, as well as infrastructure and space the library would need to consider. Question 3 asked what the three main reasons were for choosing a particular library (of which there are over 30) on campus. Of the options provided, six percent of the responses indicated that respondents chose a library for the technology that was available, although eight percent of the responses were because of the wireless or electrical available for laptops. Responses to Question 4 regarding the services they used in the past year

at a library included email/internet 31%; printing 21%; scanning 5%; and software or computer access 11%.

Question 5 asked respondents to choose the additional services that they would like in the library “learning commons”. Most of the options provided directly related to technology. At the time of the survey the committees had not thought about the various types of loanable technology, other than laptops.

Table 2: Question 5 - What additional service would you use?

What additional services would you use if they were included in the Undergrad Library "learning commons"?										
(Choose all you would use.)										
	Everyone		Undergrads		Grads		Faculty		Staff	
Additional space/resources for collaborative/group projects	276	13%	223	13%	46	12%	2	5%	5	7%
ATLAS support	49	2%	34	2%	8	2%	4	9%	3	4%
CITES account service and Help Desk presence	259	12%	185	11%	56	14%	9	21%	9	13%
Educational Technologies presence; Compass support &/or training	116	5%	75	4%	30	8%	5	12%	6	9%
Laptops to check out	227	10%	162	10%	51	13%	5	12%	9	13%
Media download to iPods	269	12%	221	13%	36	9%	1	2%	11	16%
Multimedia production equipment and support	158	7%	99	6%	43	11%	8	19%	8	12%
Pre-major advising	179	8%	169	10%	7	2%	0	0%	3	4%
Projection rooms (spaces with equipment)	162	7%	110	7%	40	10%	5	12%	7	10%
TA/faculty office hours (space)	255	12%	203	12%	47	12%	2	5%	3	4%
Tutoring services	225	10%	196	12%	27	7%	0	0%	2	3%
Other	13	1%	6	0%	4	1%	2	5%	1	1%
Total responses	2188		1683		395		43		67	

Some of the write-in responses that were submitted for this question focused on the need for laptops, software, and tools to help with their course projects. “I like the idea of being able to

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3 checkout laptops, but I would like to know what kind of software will be available in those  
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5 laptops since different students of different majors use certain programs and laptops for their  
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7 studies. Would the laptops be categorized for different majors, depending on the kind of  
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9 programs each laptop contains or every laptop will have the same programs in them”; “I see a lot  
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11 of 'microsoft' in the software you ask about, and not much alternative.”; “I think there should be  
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13 more computers available because they are usually full and many people wait in line for them in  
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15 between”; “Any technology and services that can help a student complete their assignments.”; “I  
16  
17 don't want to have to go far for anything I might need or have forgotten at home”; “access to  
18  
19 technology because of the evolving nature of classes in response to available electronic means  
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21 (powerpoint, electronic reserves, etc.);“multimedia check-out (i.e. LCD projectors, tape  
22  
23 recorders, microphones, and video cameras for class projects); “A copy/scanning place that is  
24  
25 accessible and more contemporary”; “A room where students can make videos--video camera,  
26  
27 simple editing equipment”.

### 34 35 *Informal interviews with faculty*

36  
37 Conversations with faculty throughout the eight month planning process revealed that faculty  
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39 either suggested or required that students use multimodal technology for their class projects.  
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41 Although initial conversations indicated some interest in the use of technology in courses, there  
42  
43 were changes over a several year period that had the most significant impact on the library's  
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45 loanable technology collection. A growing number of courses are affiliated with the  
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47 Ethnography of the University Initiative which seeks to “infuse research into the undergraduate  
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49 curriculum” (University of Illinois) and has elicited a number of web-based and interactive  
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51 media projects. In 2005 a new course, Writing with Video, was first offered. This course serves  
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53 as an option to fulfill the Advanced Composition requirement and was the first on campus to  
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3 utilize video as the medium for student writing. The course creators met with library faculty in  
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5 2007 to brainstorm ways the library could work to support students in these classes. These  
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7 conversations served as a major impetus for the Macs and accompanying software that were  
8  
9 added to the collection. The use of video as the medium for student writing was expanded in  
10  
11 2008 to include freshmen Rhetoric classes that provided students with the option of creating a  
12  
13 multimodal project in lieu of one of their written papers. In addition there are numerous Art and  
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15 Design courses where students need to produce and manipulate computer images, designs, and  
16  
17 photography.  
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22 In addition, several departments on campus provided examples of their technology  
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24 programs and options for loaning technology, such as the College of Education's Education  
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26 Instructional Technology Center, the School of Art and Design, and ATLAS (Applied  
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28 Technologies for Learning in the Arts and Sciences).  
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### 34 **Loanable technology purchased**

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36 Based on this input, items were prioritized and recommended for purchase, although some were  
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38 deferred for a couple of years due to budget issues. Some of the tools were made available for  
39  
40 checkout and some of the technology was located in a permanent set up in the library or through  
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42 software installed on library iMacs. Items were purchased and processed in the following  
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44 priority order:  
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- 48 • Laptops
- 49
- 50 • Digital Cameras
- 51
- 52 • Graphic and Scientific Calculators
- 53
- 54 • Digital Recorders
- 55
- 56
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- Hand held devices such as Mp3 players
- Macs for media production
- GPS units
- Microphones
- Scanners
- Hard drives
- Portable projector
- Projector equipped room

### *Gaming collection*

The loanable technology collection was supplemented in 2006 with initial purchases from the separate library Gaming Initiative, with a steady growth in purchases beginning in 2009. The video game collection includes accessories (such as guitars for Guitar hero) and consoles (such as the Nintendo DS) and has similar needs for the types of circulation and cataloging procedures developed for loanable technology. Processing these materials in a similar manner made for fewer procedures for students and staff to have to learn, and expedited making gaming materials ready for circulation.

### **Recent assessment**

In 2009 assessment of the loanable technology program began, which includes tracking circulation statistics, ongoing discussions with faculty to ascertain if there are additional tools that students need for their class projects, and questions asked of each student on the form they use to check out the equipment.

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*Statistics for loanable technology*

Table 3 shows circulations by technology type. Results of circulation reports indicate that laptops and storage media, such as USB flash drives and external hard-drives, are the most heavily circulated items. Digital video cameras showed steady increase from 28 circulations in the Fall 2010 semester to 103 circulations in the Spring 2010 semester. Further, loanable gaming resources showed sustained popularity for both Fall and Spring semesters. Calculators are also a popular technology loan item, appearing in the top five most circulated technology types in both the Fall and Spring semesters. The miscellaneous technology type, listed below, includes dry erase board accessories, USB microphone, tripod, cassette players, and a variety of cables.

Table 3 – Circulation of Loanable Technology Fall 2009 and Spring 2010 semesters

Technology Type	Sum Charges Fall 2009	Sum Charges Spring 2010
Laptop and Accessories	7904	9029
Storage	225	340
Miscellaneous	239	179
Game Console and Gaming Accessories	226	217
Calculator	84	139
Digital Video Camera	28	103
MP3 Player	42	35
Voice Recorder	23	22
Digital Camera	5	38
Portable DVD player	16	21
GPS Device	7	5



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3 *Questions asked on the loanable technology check- out form*  
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6 In order to get a better understanding of how the technology is used to support classwork the  
7  
8 following questions are asked of students as they fill out the loanable technology form they are  
9  
10 asked:

- 11 1. Is this for a class?
  - 12 2. Which class?
  - 13 3. What other technology should the library have?
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22 These questions have only recently been added to the technology loan form. After one  
23  
24 month, collected data about class use (Questions 1 and 2) indicate that voice recorders and digital  
25  
26 video cameras are borrowed for class use more than any other technology type. About 50% of  
27  
28 the time that these items types are checked out, students report specifically using them for a  
29  
30 class.  
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34 The majority of classes that require digital video cameras include: education courses,  
35  
36 rhetoric, and a number of students in a general studies course – GS101. The general studies  
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38 course is designed to help first-year students choose a major. The heavy course use by GS101 of  
39  
40 loanable technology demonstrates the support that a Library provides to students in the campus  
41  
42 general curricula.  
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46 Responses on the forms indicate that voice recorders are used over 50% of the time for a  
47  
48 course. Courses that students are enrolled in that require voice recorders include: linguistics,  
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50 language classes, and business courses. Other items in the loanable technology pool are being  
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52 used in courses such as statistics, math, and economics.  
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3 Not all of the loanable technology that is checked out is utilized specifically for courses. The  
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5 aggregate numbers indicate that about half of the time the loanable technology is not being  
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7 checked out specifically for a course. This shows that the library is also providing students with  
8  
9 access to technology that they can make use of outside of the traditional curricula. The impact of  
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11 such use is in need of further inquiry.  
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15 Responses to Question 3 indicate that the highest demand for additional items that the library  
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17 should purchase is for specific types of calculators. It is valuable to note that the suggestions for  
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19 additional calculators were made by borrowers who checked out a calculator that was available,  
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21 potentially indicating that students may use the calculator type that is available, but may actually  
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23 prefer another model entirely. In many of these instances students will include the exact model  
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25 number of a graphing calculator.  
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29 Responses on the forms are compiled and added to various word documents for later use  
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31 for justification for the types of technology needed to support classes. If a particular course  
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33 seems to be heavily utilizing specific technology, this affords librarians the opportunity to  
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35 contact the appropriate faculty, inquire about the assignment and begin a dialogue to discover if  
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37 there are additional ways the library can help support the students and the course.  
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41 Again, it should be noted that these are initial trends collected over one month in the Fall  
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43 2010 semester (54 responses) and more data collected over the next year will give librarians and  
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45 administrators a more generalized and well-rounded picture of course needs.  
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#### 48 49 50 **Cataloging and processing of loanable technology**

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52 A special cataloging template was developed in collaboration with staff and librarians from  
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54 other units for adding loanable technology to the collection. Since shelf location is not a manner  
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3 is which technology items are found, there was not a need to assign call numbers. All items were  
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5 made searchable in the catalog with a special item type, to facilitate marketing the collection, and  
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8 to allow patrons to determine which items are currently available.  
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10           Loanable technology frequently contains multiple items. These may include USB cables  
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12 to connect devices to computers, installation discs, operating manuals, and batteries. When  
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14 cataloged, the number of items included in the technology set are noted. The integrated library  
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16 system used at the University of Illinois provides an option to specify the number of items that  
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18 comprise a unit. The number of items are added on the checkout form. All items of the loanable  
19  
20 technology are photographed and this photograph is included in the checkout bag which allows  
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22 for easy identification of items during checkout and check-in by both staff and patrons.  
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27           Most items require specialized packaging. For smaller items like the iPod Nano or the  
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29 handheld GPS devices, processing includes the use of a clear plastic enveloping pouch. For  
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31 larger items like the higher end digital Cameras or the portable DVD players, a larger bag is  
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33 used. Usually these bags are black attaché type. Attached to each bag is a barcode of the item,  
34  
35 which represents all of the contents in the bag. Libraries that wish to start a loanable technology  
36  
37 programs will also want to consider the accompanying costs of technologies beyond the  
38  
39 purchase, such as: the protective cases, ordering extra batteries, and flash media storage, to name  
40  
41 a few “hidden costs.”  
42  
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#### 48 *Web page documentation*

49  
50 A technology web page

51  
52 (<http://www.library.illinois.edu/ugl/about/LoanableTechnology/technology.html>) was created to  
53  
54  
55 pull together all of the technology items in the library to provide users an easy place to learn  
56  
57

1  
2  
3 about what is available. After a piece of loanable equipment is cataloged, processed and  
4  
5 available for checkout, the technology web page is updated to reflect additions. The web page  
6  
7 also includes live links to the library catalog so that patrons can check on the availability of an  
8  
9 item.  
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### 12 13 14 15 *Training needs*

16  
17 A combination of about 30 full and part time staff provide circulation services for this collection,  
18  
19 including individuals with a variety of facility with technology. A two phase training program  
20  
21 was developed to meet these varying needs. The first part of training develops an initial  
22  
23 familiarity with loanable technology. Within service provision, staff learn the components of  
24  
25 various technology, including what certain items look like. This initial orientation, also delves  
26  
27 into the functionality of each item, including charging batteries, refreshing hard drives, taking  
28  
29 pictures with cameras, troubleshooting wireless connections, etc.  
30  
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32

33  
34 Cross training is an important aspect of the process. Staff who had previously only held  
35  
36 circulation duties at the desk began taking on responsibilities for technology processing. Some of  
37  
38 these staff members also incorporated basic level cataloging of technology into their duties and  
39  
40 responsibilities. In part, this was supported by cross training of staff from the cataloging  
41  
42 departments, who also helped develop the technology loan template.  
43  
44  
45

46 Ongoing training reviews procedures, use of items, and is an opportunity for staff to  
47  
48 discuss best practices and to suggest changes in policy or procedure based on their experiences  
49  
50 working with the collection.  
51

### 52 53 54 *Circulation policies and procedures*

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2  
3 Laptops and other items which were designated as building-use only leveraged the existing  
4  
5 circulation policies and procedures for class reserves. This allowed for expedited circulation of  
6  
7 high use items like laptops. A separate circulation procedure was designed for loanable  
8  
9 technology items which physically leave the building, and for in building use items which had  
10  
11 multiple parts or components which needed to be tracked.  
12  
13

14  
15 The circulation process for loanable technology takes longer than the regular book  
16  
17 checkout process. A separate work station was dedicated to technology loans in 2009, based on  
18  
19 experiences indicating that the high traffic at the regular circulation desk led to student assistants  
20  
21 frequently skipping steps in the charge/discharge procedure for loanable technology items (such  
22  
23 as verifying the number of pieces that came with an item). Additionally, the separate desk  
24  
25 provided an opportunity to clarify with patrons what the policies, expectations, and value of each  
26  
27 item was, in order to improve patron handling and care for the collection. Feedback from  
28  
29 patrons who were billed for lost or incompletely returned items indicated that patrons,  
30  
31 particularly undergraduate students, were not aware of the replacement costs for items, or of their  
32  
33 obligation to accurately track all the pieces that came with each piece of loanable technology.  
34  
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38  
39 At the technology desk there are forms for each item that all library patrons must  
40  
41 complete for technology which is allowed to leave the building. The technology loan form is an  
42  
43 agreement that the library patron completes stating that they are responsible for bring this  
44  
45 technology back to the library in the same condition it was checked out, including all the parts.  
46  
47 Fine and replacement cost information is also included on the form. The library and patron each  
48  
49 get a copy of this form, which is then consulted when the item is returned. The patron  
50  
51 agreements are only kept on file until after the equipment has been returned in proper condition.  
52  
53 Feedback (such as suggestions) that may have been recorded on the form is then compiled.  
54  
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3 Examples of feedback could be related to condition of the item and if adjustments or repairs were  
4  
5 needed.  
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### 10 *Reserving loanable technology*

11  
12 A process for reserving media items in advance was implemented in the Fall semester of 2010.  
13  
14 This was in response to patron request. Technology reservations follow the same procedure for  
15  
16 other reservations. The library uses a “short-loan” process for reserving items for faculty and  
17  
18 graduate students to show videos in class. This is the same process that is now used to reserve  
19  
20 technology. Much in the same way that technology items need to be marketed to incoming and  
21  
22 returning students – this new feature (one of reservations) will need to be marketed to students.  
23  
24 Additionally – the staff of the circulation desk “pull” the short loans for technology items. The  
25  
26 process of getting technology reservations ready is incorporated into the same process used when  
27  
28 staff pull videos and other media for bookings in the early morning hours.  
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### 36 **Successes and challenges of the program**

37  
38 As this program evolves there will be an ongoing assessment to discover what improvements  
39  
40 should be made to the program. Even without that type of assessment, there are various  
41  
42 successes and challenges that have already been identified, as described below.  
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#### 48 *Successes*

49  
50 Findability and equitable access. One of the useful changes made to the loanable technology  
51  
52 program was the webpage annotations for each item and links to the catalog record. This allows  
53  
54 patrons to learn about technology online. This is useful for staff as well, since many users ask  
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3 about services through online reference services, and by phone. The material is also in the  
4  
5 catalog, so that students can search for individual items specifically to see when they are  
6  
7 available.  
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11  
12 Baseline for future assessments. The library has been able to build on the original assessment  
13  
14 techniques and incorporate them as it expands into offering more robust technology services.  
15  
16 Students and others have provided very specific feedback on what they need in terms of loanable  
17  
18 technology for their work, and this information informs both the purchase of the original  
19  
20 equipment, as well as what areas to investigate when measuring the actual uses the equipment is  
21  
22 then put to. These assessments suggest that the next phase to assess in libraries will be the  
23  
24 customization of technology, as well as the library as a space where students can experiment  
25  
26 with incorporating new technologies into their academic work without having to make costly  
27  
28 purchases.  
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36 Determining program boundaries. An additional benefit of creating this program is the  
37  
38 knowledge gained from understanding what the library can reasonably provide. Although the  
39  
40 original goal was to have items that students needed in order to assist them with their projects,  
41  
42 after several items were not returned, discussions ensued to determine limits on which items to  
43  
44 provide. High cost items need to be considered carefully before purchase, since, due to complex  
45  
46 campus financial policies, the library does not directly receive reimbursements for lost items. An  
47  
48 example of this is a portable projector that was made available to assist students in their  
49  
50 presentations, which was subsequently not returned. The library did not receive reimbursement  
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3 for this item, which has affected current decisions on whether to purchase this high cost, yet in  
4  
5 demand, item again.  
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7

8  
9 Student engagement successes. The program described has direct relevance to the library's  
10 service philosophy of not only supporting the traditional research, learning and academic needs  
11 of students, but also embracing the role of students as creators of content. The technology has  
12 been used either individually or collaboratively to interface with other social media being used in  
13 multimedia projects, and has also contributed to leisure and recreational uses (such as for student  
14 organizations) that speak to other student needs and potential connections to build with the  
15 library.  
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### 25 26 27 *Challenges*

28  
29 Billing and replacement issues. As noted above, the challenges in circulating loanable  
30 technology items include the structures of cost recovery in the library. If an item is lost, the  
31 student's account is billed. When paid, this money does not find its way back to the originating  
32 library which leveled the fund and as such, replenishing loanable technology resources is a  
33 yearly budget exercise where funds are not committed in an assigned budget line. Without a  
34 replacement fee the library has to think critically about whether or not to replace the equipment,  
35 and how to sustain the program knowing that the average shelf life of most of the equipment is 3-  
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46 4 years under the best conditions.  
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51 Limitations in quantity and types of equipment. Faculty in departments that cannot provide  
52 technology either because of cost or other roadblocks have started recommending the library's  
53 loanable technology collection to their students. With increasing reliance on technology in many  
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3 courses, librarians will need to expand their consultations with faculty in order to document the  
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5 technology use and requirements related to courses. For example, in Fall 2009 the freshmen  
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7 Rhetoric program created a custom e-book as the course text. This e-book includes many  
8  
9 multimedia features such as embedded videos, links to web pages from the library and  
10  
11 elsewhere, and the ability for students to take personal notes throughout. The use of such texts  
12  
13 raises questions for libraries with regard to what software they provide on their computers and  
14  
15 what mechanisms they provide for students to view and use these e-texts both in the library and  
16  
17 via loanable technology. The library is investigating what would be needed in order to loan out  
18  
19 iPads to support this increasing need for students to be able to download e-books and course  
20  
21 related texts.  
22  
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26  
27 With the lack of information technology resources in a decentralized campus  
28  
29 environment, the academic library must find a balance among delivering resources to students, as  
30  
31 well as other campus members. If the library hopes to sustain this program it will need to have  
32  
33 an ongoing budget line as well as a collection development policy and replacement policy.  
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39 Support issues. Another challenge is that library IT is not staffed to provide support of items  
40  
41 except for loanable laptops. Library staff have had to learn how to check each incoming item for  
42  
43 any needed maintenance. This requires them to participate in ongoing training and to tolerate a  
44  
45 degree of uncertainty, since often, new technology comes in and staff are not immediately aware  
46  
47 of how each item operates. Essentially, this is a challenge of staying up to date with training and  
48  
49 the rapid rate of growth with the library technology loan pool. Additional challenges are faced  
50  
51 by reference staff who may be approached by students for assistance in saving and manipulating  
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3 video and audio files they have created using the loanable technology. The wide variety of  
4  
5 equipment available can make it difficult to provide simple solutions to their questions.  
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9  
10 Ensuring availability. A common question at the technology loan desk regards renewing the  
11  
12 equipment. Current policy is to not renew items from our technology loan pool. Students who  
13  
14 have started using the technology resources would like to have more time with the technology  
15  
16 they have. In an effort to protect the greatest use of the collection, the library is implementing a  
17  
18 three-day waiting period after items are returned. This is an important step in the process as there  
19  
20 can be large numbers of students seeking to use the same equipment for the same assignment  
21  
22 during the same time period. The reservation program that has just begun may also help ensure  
23  
24 greater access for those wishing to use loanable technology items.  
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31 Marketing the program. Currently students learn about the loanable technology program either  
32  
33 by inquiry, word of mouth, the library website, Twitter feed, blog, large posters, displays, and  
34  
35 through instruction and new student orientation. The next step to explore is how to effectively  
36  
37 market this program more broadly and especially to the classes that are requiring multimodal  
38  
39 projects while not creating expectations that cannot be met regarding the availability of the  
40  
41 equipment.  
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## 45 46 47 48 **Conclusion**

49  
50 The loanable technology program has had a mix of successes and missteps in its 5 year  
51  
52 history, but has found significant evidence to support the need for a loanable technology program  
53  
54 to support student's academic needs. Since the workplaces of the future will require technology  
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3 fluency, the library, by offering opportunities for engagement with technologies that assist with  
4  
5 developing presentation and multimodal projects, is preparing a generation of individuals who  
6  
7 have experience with a multiplicity of high tech tools.  
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10  
11 Future directions for the program may include the incorporation of iPads. The iPad runs  
12  
13 Apple's iOS mobile operating system and offers an increased level of customization. It is  
14  
15 configurable with after-purchase software components. The library can develop mobile software  
16  
17 applications or load third-party developer applications. For example, the iTunes App Store hosts  
18  
19 a variety of freely available educational applications. This increased customization of loanable  
20  
21 technology is a new and exciting opportunity for technology access in libraries. The significance  
22  
23 of such customization may lead to a variety of library tools ranging from in-building orientation  
24  
25 applications to campus-wide exploration. The tools that are loaned in the future will serve a  
26  
27 diverse set of functions and create increasing learning opportunities that were previously not  
28  
29 available to students.  
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34  
35 The library also needs to understand the experience of the student while using library  
36  
37 loaned technology resources. Field research (or ethnographic methods) may help the library  
38  
39 understand the narrative of use – interviewing, observation, or focus groups may be the way  
40  
41 forward for piecing together a narrative of use. These represent areas for further study.  
42  
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44  
45 The library administration understands that these are necessary tools for completing  
46  
47 assignments, but what is the story to be told of that use? A possible and desired next step in the  
48  
49 technology loan program would be to decide on a type of technology to study and a specific  
50  
51 course which uses that technology. An example would be working with a program (such as the  
52  
53 business school or linguistics program) that requires the use of voice recorders to study how they  
54  
55 are used.  
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3 As this program develops it is uncertain what lies ahead. In the future will the library be  
4 a provider of other resources to supplement technology; a place to go for support and instruction  
5 in using those tools and the recognized Student Technology Hub? For libraries to remain  
6 relevant they must be proactive to the needs of their students and the role of technology on their  
7 campuses. As Abram and Luther (2004) implored “They are coming. We had better be ready.”  
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