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Circulating Laptops in a Two-Year Academic Library: A Formative Assessment

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PEER REVIEWED

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Introduction

Georgia Piedmont Technical College (GPTC), a unit of the Technical College System of Georgia, is a public, two-year institution headquartered at two main campuses in Clarkston and Covington, with several satellite campuses and off-campus programs. Enrollment is about four thousand full-time equivalent (FTE). Approximately 80 percent of GPTC students receive Pell Grants, indicating widespread financial need. Each main campus houses a library, or Learning Resource Center (LRC), staffed by at least one professional librarian at all times that the LRCs are open. In early 2014, the president of Georgia Piedmont Technical College charged the Office of Information Technology (OIT) and the Learning Resource Centers with the task of designing a pilot project for a student laptop checkout program. This program launched in the summer semester of 2014 with an ongoing, formative assessment. The plan involves checking refurbished laptop computers out to students to remove from the campus for a period of time. The LRCs are responsible for checkout, check-in, and record keeping in the Ex Libris Voyager integrated library system, while the OIT's Student Hub help desk is responsible for maintenance of the computers.

Review of Literature

The available literature on this topic is surprisingly sparse, and very little specifically addresses issues in two-year colleges. Additionally, most programs described in the literature did not allow laptops to leave the library, a requirement of GPTC's plan. One program that allowed external loans was described by Buzzard and Teetor (2011), who reported that the University of Arizona's program had been successful and had added iPads to borrowing options. Buzzard and Teetor also described a system they created that used pocket cards on the outside of storage cabinets for keeping track of laptop locations and statuses. They reported that the system facilitates viewing the status of laptops and other equipment at a glance. Prisk and Brooks (2005) caution against purchasing a large amount of expensive equipment for a program that has not been tested, or without consulting the targeted users. This was not an issue for GPTC, since the program used existing, refurbished computers and had a low initial cost.

Most libraries evaluated their programs using some combination of statistics and user satisfaction measures. The Emporia State University survey included questions on student demographics, awareness of the program, and program usage (Gutierrez and Summey 2011). The Colorado State survey focused entirely on laptop usage, including frequency of use, tasks performed, frequency and type of problems encountered, and general user satisfaction (Feldmann, Wess, and Moothart 2008). As a result of their evaluations, two universities have noticed a decline in laptop checkouts as internet device ownership has increased. Southern Polytechnic State University decided to upgrade its equipment and continue its program (Chen and Mills 2011). GPTC staff members were especially interested in this

decision due to the age of the laptops to be used for the pilot project. The University of Guelph, in contrast to Southern Polytechnic, discontinued its program in the wake of declining demand, also citing the increase in student-owned devices (Wang and Arlain 2014). Ryerson University's student satisfaction survey offered interesting results that provided guidance for the continuation of their in-library lending program (Wang et al. 2014). Students overwhelmingly stated that of all mobile devices, laptops were the most important to facilitate their success in school and recommended improving the program by offering longer loans and adding faster, smaller laptops with more powerful batteries to increase availability and performance. Based on the student survey, Ryerson continued and enhanced its laptop lending program.

Public, school, and special libraries have also experimented with laptop lending. The Lewis and Clark Library in Helena, Montana, established laptop lending for in-library use in 2012 (Talwani 2012). The Lane Public Library in Hamilton, Ohio, discontinued its laptop lending program after several laptop thefts, in spite of its in-library-use-only policy (Schwartzberg 2013). Schools in Henrico County, Virginia, loaned a laptop to each student for the school year and found that online library resource use increased but encountered widespread problems with inappropriate use, including hacking school data and circumventing filters to access inappropriate sites (Minkel 2003). As early as 2002, the National Institute of Standards and Technology was lending laptops to expand researcher access to library resources beyond the library (Allmang 2002).

Although laptops appear to be the most common equipment loaned in the reviewed literature, several programs located in libraries and other campus service points loaned a wide array of equipment. Ryerson University students enthusiastically used the iPad lending program; however, additional iPads were needed to meet demand (Eichenlaub et al.

2011). The Arizona Health Sciences Library also loaned iPads and in a preliminary evaluation found that while popular, the iPads confused some users who were not familiar with the interface (Capdarest-Arest 2013). Young (2014) reported on some extreme examples of library equipment lending. He noted that North Carolina State University began experimenting with lending Google Glass, and Colgate University even established a program lending camera-equipped drones, after training borrowers in their use.

Becker (2014) identifies some common themes in assessments of laptop lending programs. First, students generally like them and enthusiastically use them. Second, none are without their problems, most notably maintenance logistics, demand that outpaces supply, and foot traffic disruption when programs are based at circulation desks. Becker concludes that forming partnerships with campus departments (such as OIT) may ease the burden on the library. These themes were foremost in the minds of GPTC staff as they began planning for the program.

An informal poll of Georgia technical college libraries received seventeen responses and revealed that only three libraries currently lend laptops to students for use outside the library. Three additional libraries lend other types of equipment, such as e-readers. The majority of respondents (eleven) do not lend any technology at all. Most libraries that have had a lending program (either current or discontinued) reported problems with their programs. Eleven programs cited abuse of the privilege, such as excessive overdue items, as their main problem. The second most frequently cited problem was abuse of the equipment resulting in damage. Interestingly, one library reported that the program was insufficient to meet the needs of its students. In spite of the problems, most libraries indicated that the biggest benefit to their students was that students in desperate need of technology were able to have some access to it.

Program Design

After initial discussion of the program and the various roles of those involved, the program became a joint effort between the OIT and the LRCs, which would relieve the LRC staff of tasks that they were unqualified to perform, such as inspecting returned computers, preparing them for the next checkout, and providing technical support. The college administration set the general parameters of the program, which included stipulations that the laptops must circulate off-campus and that the LRCs would handle checkout and record-keeping. The division of labor negotiated between the LRC and OIT was very specific: all technology-related tasks were to be done by OIT, with checkout, check-in, and overdue notice generation to be done by the LRCs. With this division of labor in mind, the LRC staff met in mid-April to begin planning for the kickoff of the program, slated for the beginning of the summer semester.

The first urgent task, given the one-month window for planning, was to develop policies. Full-time LRC staff held a meeting at which participants identified opportunities and potential problems and proposed policies. After this meeting, the LRC director developed policies based on the staff input and best practices identified in the literature.

The laptops arrived with locking charging cabinets, allowing the LRC to check out fully-charged laptops for student convenience. Each laptop was accompanied by a case and charging cable and was assigned a brief record in the LRC's integrated library system and barcoded accordingly. Staff decided not to affix security devices (in this case, 3M Tattletape) to the laptops due to the potential damage caused by desensitizing and resensitizing.

Marketing for the program included one activity: a bulk e-mail to students two days before the launch. The day after the bulk e-mail provided an opportunity to gauge interest prior to the launch. LRC staff at both campuses

reported numerous students inquiring about the program. On the DeKalb campus launch date, May 21, 2014, a line of students formed outside the LRC prior to the opening time. All five computers were checked out within fifteen minutes of opening. The checkout process was very efficient. The Newton campus launch occurred on May 22. Demand was not as high initially; however, all five laptops were checked out within two days. After the initial round of checkouts, demand remained high at the DeKalb campus and somewhat lower at the Newton campus.

The next phase of the project for the LRC consisted of waiting for laptops to be returned, monitoring demand, and, for OIT, waiting for problem reports from students. During the time between the first round of checkouts and the first check-in, student inquiries about laptop availability were frequent. The LRC staff decided to reduce the loan period from two weeks to one, in order to offer more students the opportunity to check one out. During the first two weeks of the program, OIT reported no student support requests for the laptops. As the semester continued, OIT began to receive support requests. According to OIT, the most frequent reason for support requests was needing additional software installed. OIT has seen very few technical problems.

Methodology

As part of a mid-term preliminary assessment of the program, staff designed a ten-item questionnaire to capture information about the students' motivations for borrowing laptops, as well as how they are using them and their opinions of the program. Staff decided to keep the questionnaires brief and easy to complete at the point of check-in. The main interest at that time was the nature of laptop use and problems being encountered by students. The LRC staff decided that a deeper assessment of borrower demographics and other factors would take place at a later time, after the initial decision to continue or discontinue the program

had been made. Circulation staff distributed a questionnaire with every laptop return and examined them as they were received, giving the staff the ability to rapidly react to students' opinions and needs and adjust services accordingly. As a result of the immediate review of questionnaires as they were returned, OIT staff upgraded the operating system and some applications mid-semester to better accommodate student needs. The survey collection period ended on July 31, at which time the decision about the future of the program was scheduled to be made.

Preliminary Results

After July 1, the LRC conducted an initial review of the satisfaction survey. Forty unduplicated checkouts occurred and twenty-two questionnaires were completed through June 30. Results (appendix) ranged from the expected to the very surprising. Over 40 percent of respondents had access to a computer at home. The most frequently cited reason for checkouts by students with home computer access was the lack of the necessary software on home computers. The next most frequently cited reason was the portability of the laptops. This reason, however, tied with "other," which consisted largely of technical problems with students' personal computers. This may indicate a lack of awareness of the Hub, which provides free technical support for students' personal devices. Most of the respondents (95 percent) used the web on the laptops, with 44 percent of those using it at home, an indication that at least some users have access to the internet at home. Twenty-four percent used the web on the GPTC campus; however, the questionnaire did not ask at which location on campus students are using the laptops. On-campus usage patterns may be of assistance in planning future directions for the program. Most students (53 percent) used the laptops for one to three hours per day; however, 21 percent used them for more than five hours per day.

The most-used software and websites fit an expected pattern. Nearly one-third of respondents reported using Angel, GPTC's learning management system. After Angel, Banner (the registration and student records system), student e-mail, and Microsoft Office applications were roughly equal in popularity. In general, students were satisfied with the software installed on the computers, with 80 percent reporting that it was satisfactory. Several reported needing additional, specialized software required by their courses. The Hub was able to accommodate most of these requests.

The most frequently reported problem with the laptops was slowness, which is not surprising given the age of the laptops. This issue is being addressed by OIT along with the software upgrades. Suggestions for improvement of the program were illuminating. There was a strong preference for extending the checkout period, with more than half of respondents requesting more time with the laptops. Several others suggested making more laptops available. Other suggestions focused on the laptops themselves and included improving speed and wireless connectivity. Overall, the program was well-regarded by students, with 85 percent rating it very helpful or absolutely essential.

Discussion and Preliminary Recommendations

While final evaluation of the program will occur later, this initial review indicates a generally positive direction. Students appear to like the program and desire to see it continue and improve. Unlike the Southern Polytechnic and University of Guelph cases, demand for GPTC laptops is expected to remain steady due to the nature of the student population, which is primarily economically disadvantaged, as demonstrated by the lack of computing resources at home reported by nearly 60 percent of respondents. Therefore, discontinuation of the program is absolutely not recommended. For the LRC and OIT staff, the

task will be ensuring improvement and sustainability.

The strong desire among students for more laptops and a longer checkout period appear to have the same solution: addition of more laptops. The reason for the reduction in checkout period during the pilot project was to get the laptops into the hands of as many students as possible to meet demand, let the LRC and OIT staff practice new procedures, and collect as much feedback as possible. It is clear that a balance must be struck between accommodating the number of students needing laptops and accommodating students' need for longer checkout periods. The only way to reach this balance is to add more laptops. Anecdotally, support among the college staff for providing additional laptops may be an interesting avenue to pursue, with at least one academic affairs staff member offering to donate his old laptop for the program. Meeting the demand for more laptops should not be difficult and should enable the LRCs to re-establish the two-week checkout period.

Another advantage of adding more laptops is that it will facilitate a renewal or reservation option. For the pilot project, renewals and reservations were not allowed, again in order to get the laptops into the hands of more students and be fair to students who need them. With demand being better met, the opportunity for students to have one renewal or reserve a laptop in advance may be possible.

Future opportunities for the program, assuming eventual improvement of economic factors, are numerous. First, replacement of the older, refurbished computers with smaller, faster, and more powerful equipment would maximize storage space, making it easier for the LRCs to store more computers in existing cabinets, and enable students to carry and use them more easily. Another option that may be met enthusiastically by students is the introduction of tablet computers to the program.

The initial intention of the short survey was to get a look at how students use the program and how they perceive it, so that needed procedural changes could be quickly identified and executed prior to the possibly higher demand in the fall semester. The next step in the evaluation of the program will be a detailed analysis of user demographics, usage patterns, challenges, and needs to guide the program in the long term. To conduct a meaningful analysis, the LRC may use multiple methods of evaluation, such as questionnaires and focus groups.

Long-Term Developments

As of the writing of this paper, the program has been in place for two semesters. Several of the recommendations of the study have been implemented. Seven laptops were added and assigned to the DeKalb campus due to higher demand. Five additional laptops were assigned to the Newton campus. OIT also added two laptops with highly specialized software at the DeKalb campus, specifically for use by students in AutoCAD courses. The college administration has identified a goal of adding laptops until there are always one or two available for checkout. With the added laptops, the LRC has been better able to accommodate demand; however, with this increasingly complex program, staff have reported some confusion and stress using a record-keeping system designed for a smaller number of laptops. The LRC director has redesigned the record-keeping system to resemble the one developed by Buzzard and Teetor (2011).

Expected problems have arisen, such as broken laptops and lost peripherals. Overdue items have also been a problem, with students feeling free to return laptops a day or two late. In three cases, laptops were overdue for a sufficient time that a campus police report had to be made. These problems indicate a need to restructure fines and penalties for overdue laptops. The overdue laptop problem was addressed by a committee meeting in January

2015. Plans to strengthen consequences for past-due laptops are forthcoming and may include an adjusted system of fines and other penalties, such as suspension of privileges for repeat overdues.

Sander, Mestre, and Kurt's book *Going Beyond Loaning Books to Loaning Technologies: A Practical Guide for Librarians* (2015), which was not published until after the program was planned, implemented, and evaluated, addresses several of the concerns that GPTC staff have identified. This book will prove to be a valuable resource in adjusting the LRC's procedures to improve the program and prevent recurrence of problems. The LRCs have already begun implementing some of the recommendations in the book. The increasing complexity of the program has created a need for centralized management of laptop checkout and overdue monitoring, generation of notices and reminders, coordination of activities with OIT, and non-technical maintenance of the laptops. Sander, Mestre, and Kurt (2015) recommend having a designated staff member or members responsible for addressing laptop issues. In January 2015, the LRC and college administration decided to redesign and fill a vacant part-time library assistant position with a primary assignment of providing these services. The position will be posted in the

latter half of fiscal year 2015. Sander, Mestre, and Kurt also recommend sending overdue and courtesy notices both in print and electronically. The LRCs started e-mailing notices in early 2015. As the program matures, Sander, Mestre, and Kurt's ideas regarding creating a reservation system and renewal policies may also prove to be useful.

With the laptop lending program, GPTC has identified an area of great student need and started the process of meeting it. While it has been and will continue to be a challenge, the program is clearly an advantage to GPTC students. The creation of the special position should alleviate the stress experienced by LRC staff and make the program operations run smoothly. The satisfaction of students with the program, the promise of administrative support, and the commitment of staff to making it even better should ensure the success of the program for a long time to come.

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Appendix
## Complete Survey Results

Do you have access to a computer at home?
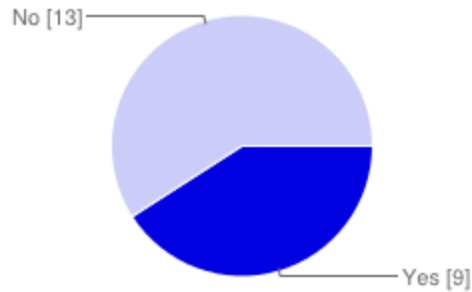
Yes	**9**	41%
No	**13**	59%

If you have access to a computer, what is your primary reason for checking out a laptop at the Library?

I cannot use the computer when I need it.	**3**	18%
The computer doesn't have the software/programs that I need for school.	**6**	35%
The laptop is easier to carry.	**4**	24%
Other	**4**	24%

Did you use the internet (web) on this laptop?
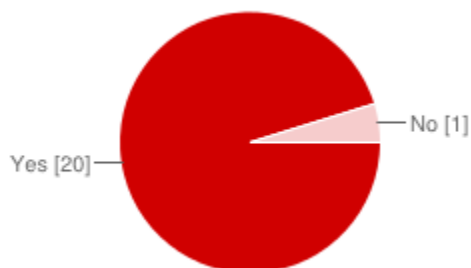
Yes	**20**	95%
No	**1**	5%

If you used the Internet (web) on this laptop, where did you use it (check all that apply)?

Home	**15**	44%
GPTC campus	**8**	24%
Other college campus	**0**	0%
Work	**4**	12%
Public wireless hotspot (McDonald's, Starbucks, etc.)	**6**	18%
Did not use the internet (web) on this laptop.	**0**	0%
Other	**1**	3%

What did you use on this laptop (check all that apply)?

Microsoft Office applications (Word, PowerPoint, Excel, Access, etc.)	**13**	20%
Angel	**20**	31%
Banner	**14**	22%
Social media (Facebook, Twitter, Instagram, etc.)	**0**	0%
Student e-mail	**14**	22%
Other e-mail	**1**	2%
Streaming audio/video	**0**	0%
GALILEO	**0**	0%
Library Catalog (GIL)	**0**	0%
Other	**2**	3%

Did the laptop have the software you needed to complete your school work?
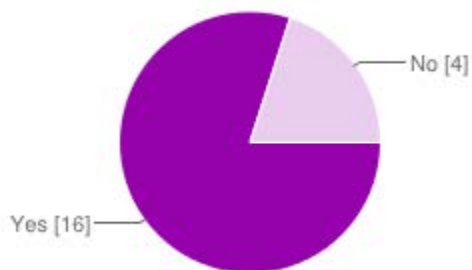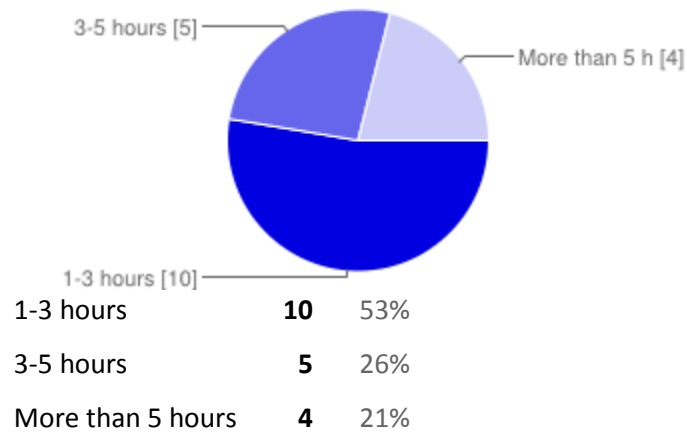

Yes	**16**	80%
No	**4**	20%

If not, what program(s) was not loaded?

- Web bowser didn't support mylabplus.
- AutoCAD
- Google Chrome
- Firefox
- Angel

**On average, how many hours did you spend per day using the laptop for school?**

1-3 hours	**10**	53%
3-5 hours	**5**	26%
More than 5 hours	**4**	21%

Did you have any problems using this laptop? Please describe

- Laptop 2 runs slow.
- It had a few problems w/slowness probably had a virus
- The screen froze
- Extremely slow.
- Lack of browser support.
- No
- Need Office 2013 for the new SIMNet
- It was running slow at times.
- Connecting to Wifi
- Browser issues
- It crashed.

In your opinion, how helpful is the laptop checkout program for helping you complete and submit your assignments?
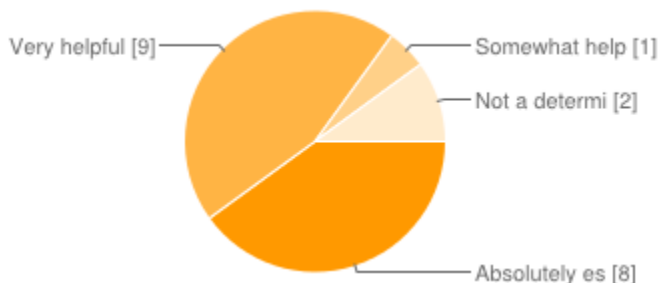
	8	40%
Absolutely essential		
Very helpful	**9**	45%
Somewhat helpful	**1**	5%
Not a determining factor in my school performance	**2**	10%

How can we improve the Laptop Lending Program?

- Give the students more than one week to use the laptop
- Allow people to use it longer than 2 weeks.
- Great program!
- Longer usage
- 2-week rental
- Work on the connections
- Renewal more than once, it helps out a lot, but 2 weeks comes too quick.
- Update laptops
- Improve speed and capabilities.
- We need longer access to it. For the Semester or at least a month.
- If maybe use can be extended for students
- Having a bit more computers.
- More available computers to loan
- Extend length of time.