



Just What Does Someone Have to Do to Gain Access to a Computer in the Library?

By: Gillian (Jill) D. Ellern & Robin Hitch

Abstract

There is a clash of principles between protecting privacy and that of protecting security that can reach an impasse between libraries, and their IT departments and academic administrations over the authentication issues with PCs in the public area of the library.

This is not a new issue. Decreasing budgets; increasing legislation, such as the Patriot Act, CALEA; new licensing agreements for specialized software and web resource; allowing access to secured campus storage; and increased user traffic that requires the need to control the use of its limited computer resources have all made authentication progressively attractive and necessary.

But authentication comes at a high price for librarians. There are ethical dilemmas that come in direct conflict with some basic librarian ethics. In particular, authentication creates a number of issues including patron privacy because it makes possible to collect, review and use data; freedom of inquiry because it could limit or at least put a damper on a patron's research interests; increasing the complexity of using public area machines that can create barriers for access as well as be frustrating and time consuming; and open access needs for the public or guest users because these unaffiliated users often have limited access in segregated locations.

While open or anonymous access isn't a complete safeguard for all these ethical dilemmas, it does help create an environment of free, private and open access equivalent to what is currently the situation with the book collection in most libraries.

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Archived version from NC DOCKS available at: <http://libres.uncg.edu/ir/wcu/listing.aspx?styp=ti&id=37442>.

Just What Does Someone Have to Do to Gain Access to a Computer in the Library?



Jill Ellern and Robin Hitch
Hunter Library

Overview

There is a **clash of principles** between protecting **privacy** and that of protecting **security** that can reach an impasse between libraries, and their IT departments and academic administrations over the authentication issues with PCs in the public area of the library.

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But authentication comes at a high price for librarians. There are ethical dilemmas that come in direct conflict with some basic librarian ethics. In particular, authentication creates a number of issues including patron privacy because it makes possible to collect, review and use data; freedom of inquiry because it could limit or at least put a damper on a patron's research interests; increasing the complexity of using public area machines that can create barriers for access as well as be frustrating and time consuming; and open access needs for the public or guest users because these unaffiliated users often have limited access in segregated locations.

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Objective

We wanted to know how many academic libraries in North Carolina authenticated, why they authenticated and if they were forced to authenticate. We also wanted to know if there were any events that led up to a decision to authenticate and the level of knowledge the librarians had about the computer activity logs that were kept. While we were at it, we wanted to ask other general questions about the computers in the public area and how they were organized to meet the needs of the academic community while serving the public.

Methodology

Survey using Qualtrics online tool

Setup the questions
and created a database of libraries in NC

Tested survey with the UNC system libraries
from Oct – Dec 2010

Sent surveys to the rest of the NC academic libraries
in Dec 2010

Followed up with
librarians via phone call
and email
from Jan-March 2011

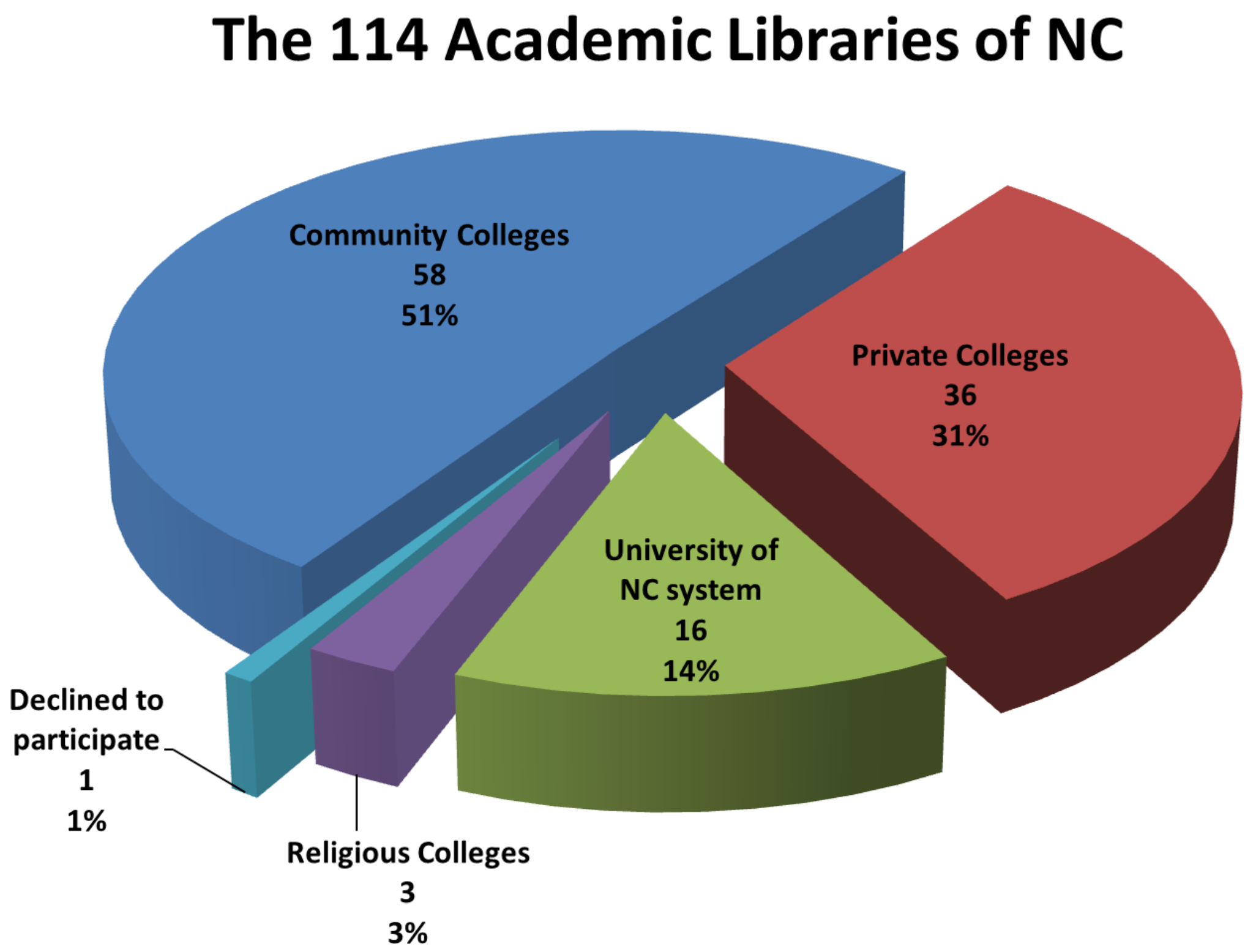
Visited select libraries as
a "Secret Shopper"/Guest
User in Sept 2011

Performed data normalizing and statistical analysis
since November 2011

Study Population

To create the list of academic libraries in NC, the researchers used the ALA directory, the NC State Library's online directories of libraries, and visited each library's web page to create a database of all 114 of the NC academic libraries. Other data was collected and compiled on each library to augment this date included the type of library, current contact information on a person that might be able to answer questions on authentication in that library, book volume of the library, enrollment figures and the name and population of city or town the college/university was located.

Types of NC Academic Libraries



About the Questions Asked

We asked 36 different questions using a variety of pull down lists, check boxes and fill in the blank questions. In setting up the survey we had 7 branches or skip logic that depends upon the answer given. This is because we knew that the setup of the computers in the public area of libraries can be very variable especially if they differentiate between Student Only and Guest/Public Use Only PCs.

The 7 Different Areas of Inquiry

- Description of the libraries and their public areas
- Authentication practices
- Characteristics of the Student-Only PCs
- Characteristics of the Guest/Public PCs
- Characteristics of the Wireless Access
- Privacy and Misuse Incident Reports
- Knowledge of Computer Activity Logs

Data is a snapshot in time between October 2010 and March 2011

Contact Information

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What Do We Mean By "Authentication"?

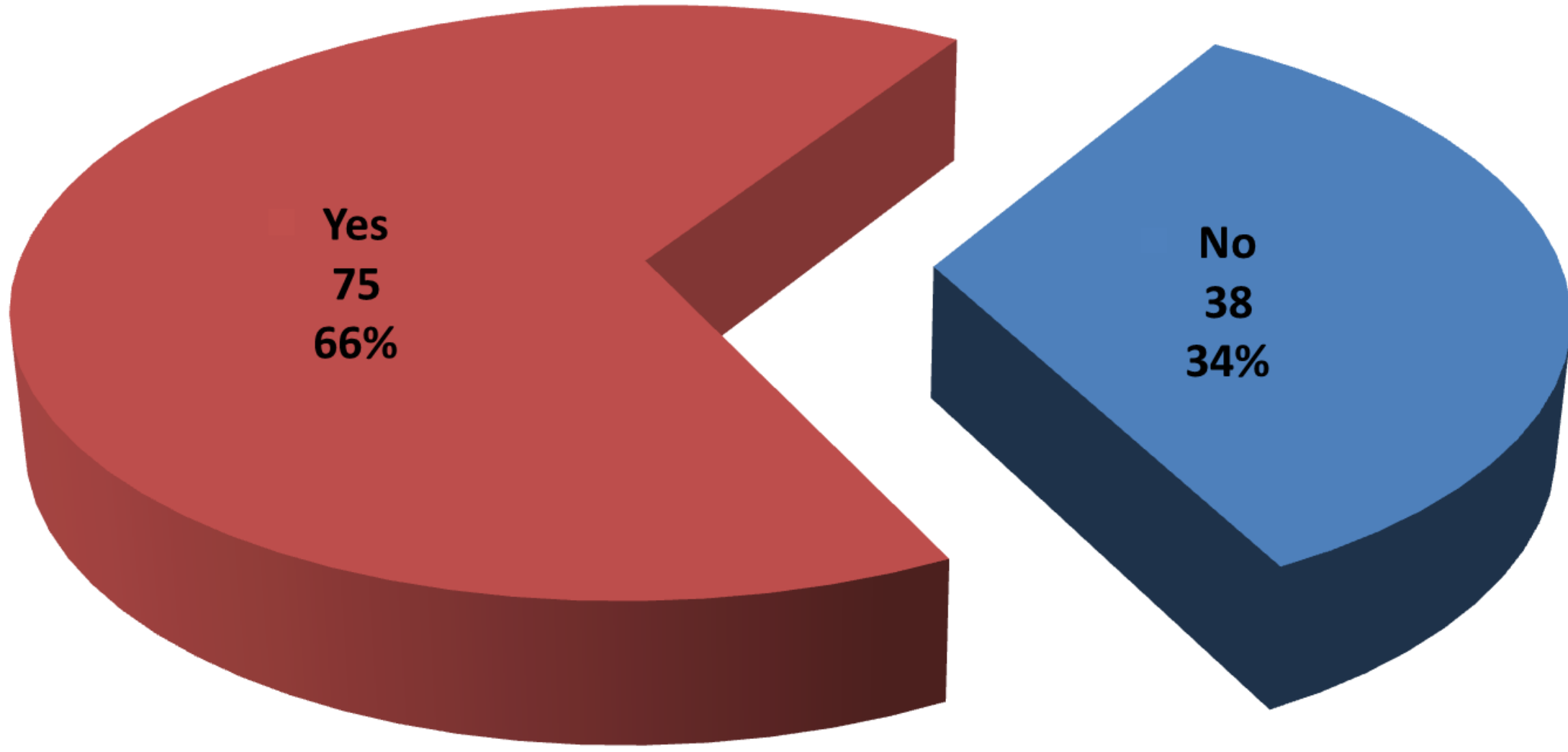
By authentication, we mean the action(s) needed to be taken by the patron in order to obtain gain access to use the computers in the library's public area.

Examples of Authentication

Campus centralized or networked login
Manual paper sign-in sheets
Preset or temporary logins
Guest ID Cards
PC scheduling software
Use of the Library system in some form
Staff members log in guests
Independent authentication systems

Findings

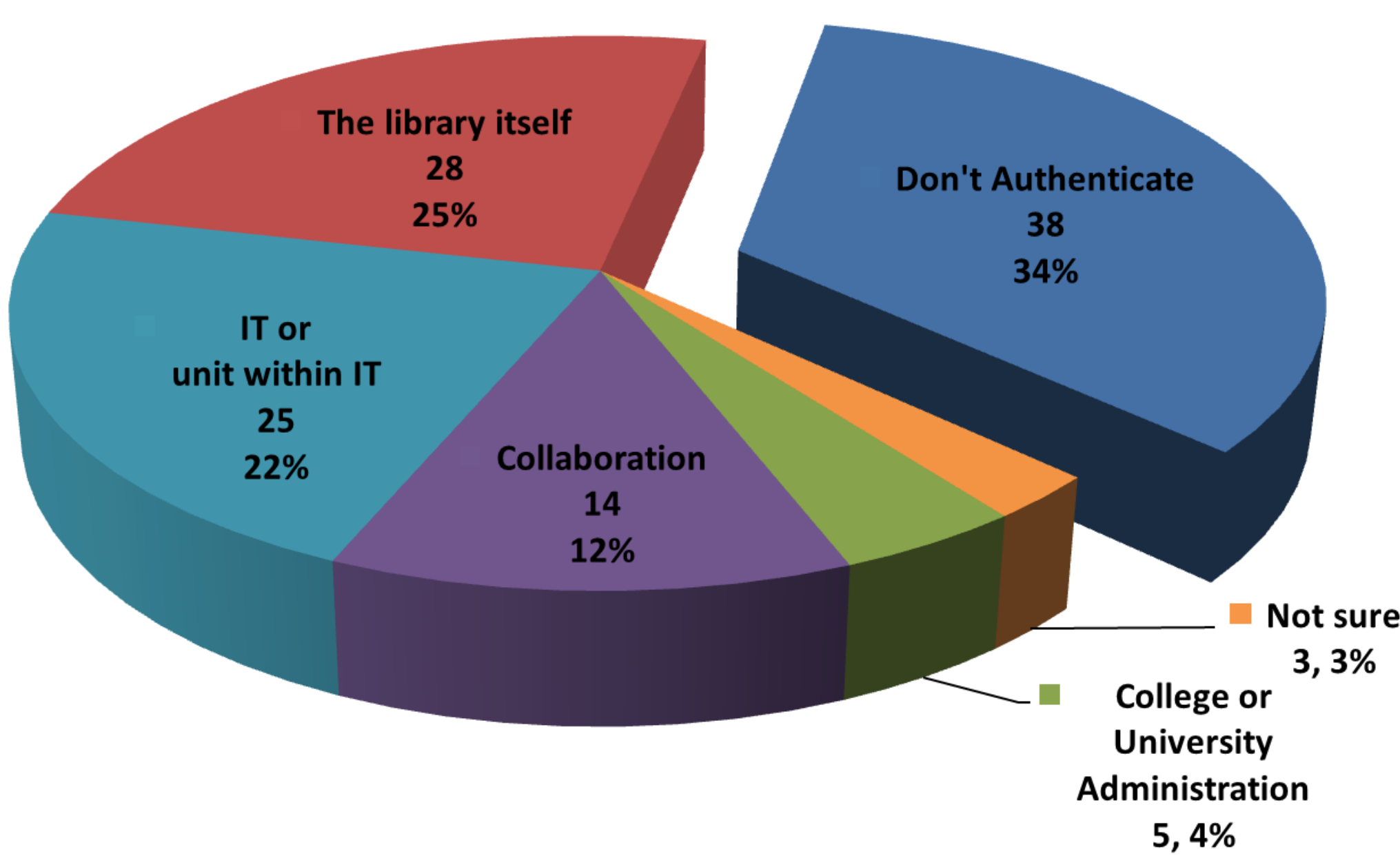
Authentication Used on any PCs in Public Area (all 113 libraries)



Top Reasons Why Authentication is Used or What Lead to Its Use to Control (75 Authenticating Libraries)

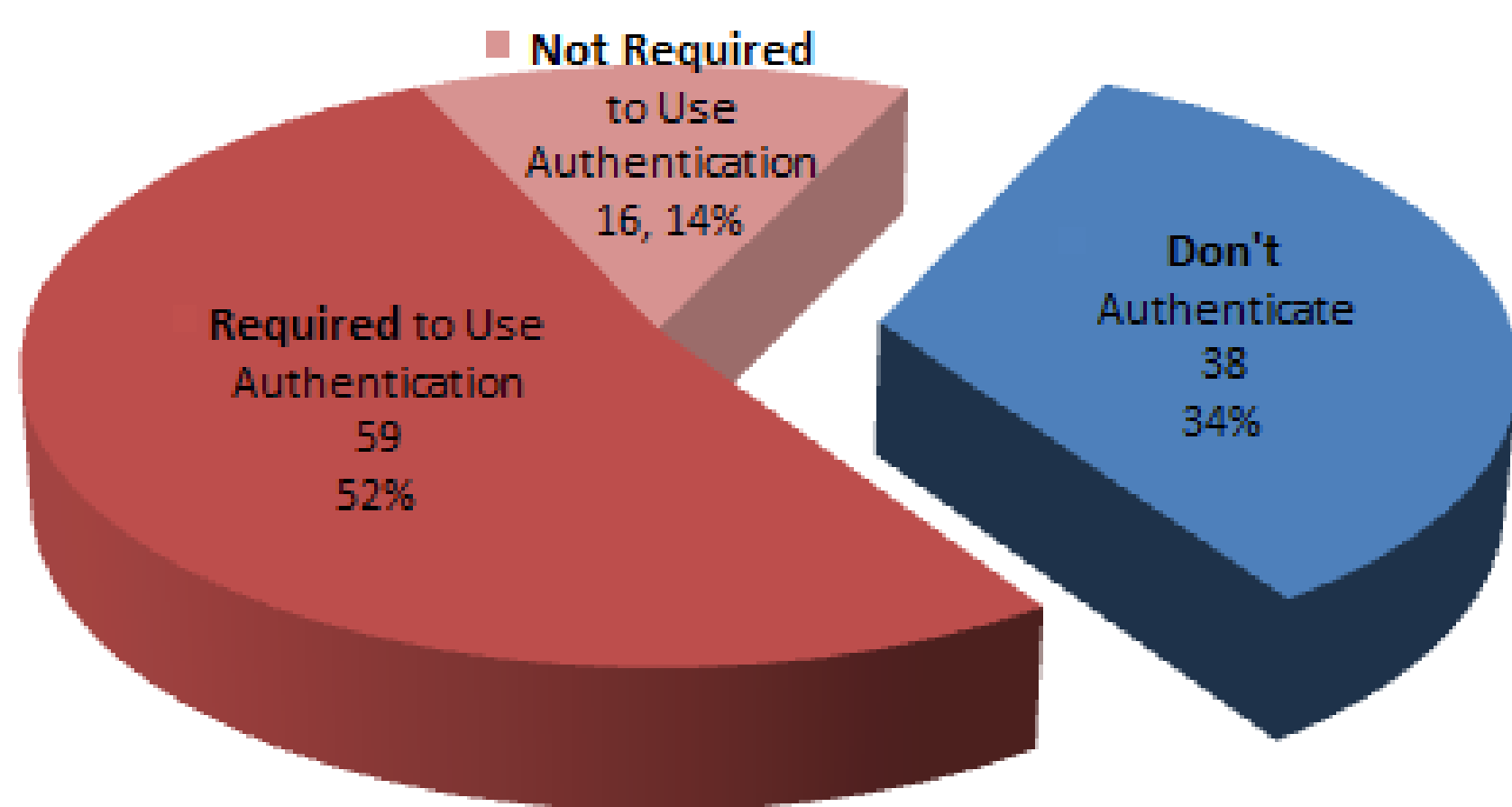
Reasons	Number	Percentage of those that Authenticate
Prevent Missuse of Resources	45	60%
Inability of Students to Use the Resources Due to Overuse by the Public	24	32%
Computer Abuse	22	29%
Mandate by Parent Institution or Group	14	19%
Printing	11	15%
Access Control	10	13%
Statistics	8	11%
Control Underage Use	2	3%

What Campus Group Required or Mandated Authentication? (all 113 Libraries)



Authentication Topics

Authentication Used on any PCs in Public Area
(all 113 libraries)



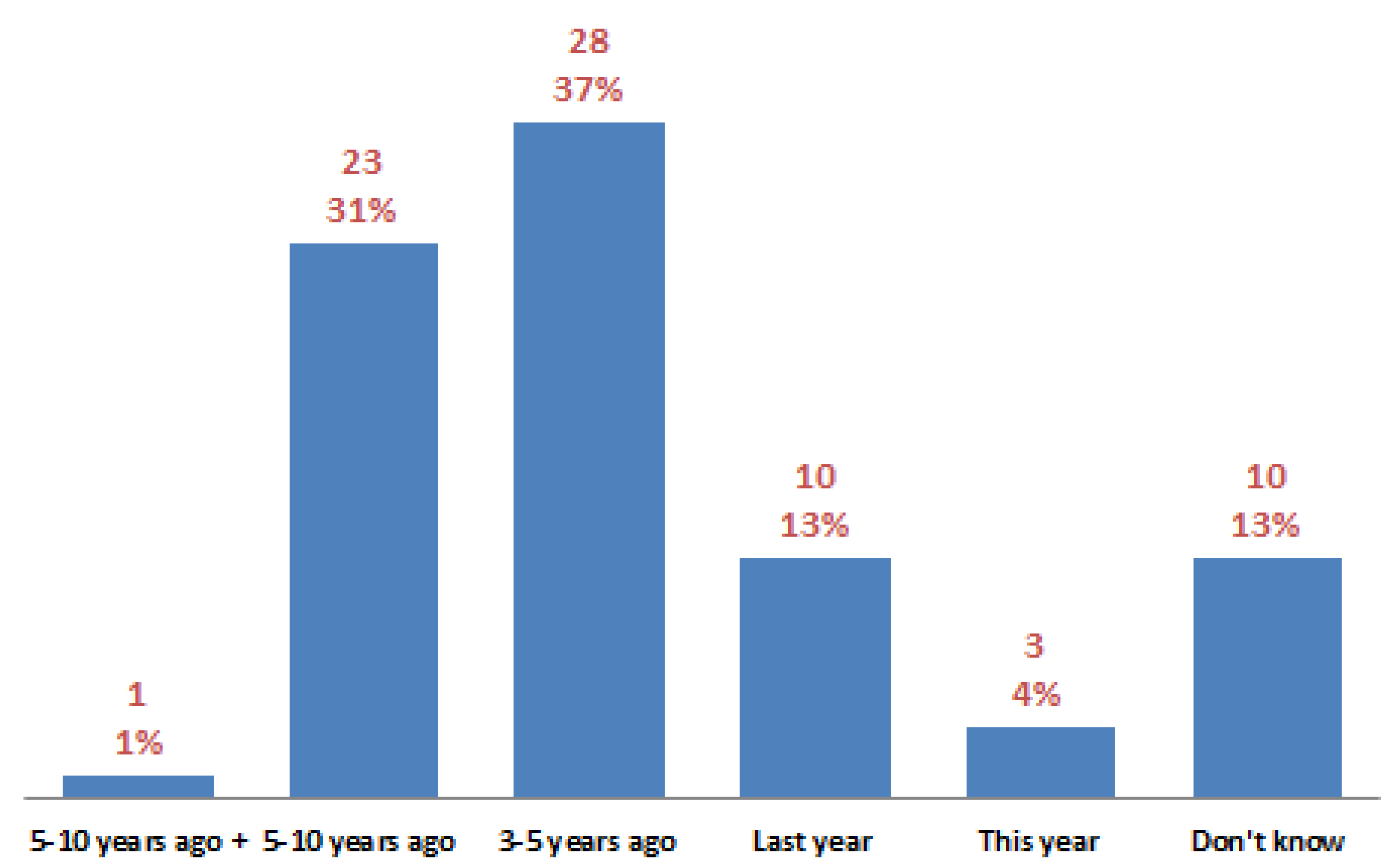
How are Users Informed of the Authentication Policy?
(75 Authenticating Libraries)

Method of Informing Users	Number	Percentage of those that Authenticate
Login or sign on screen	58	77%
Training session or other presentation	19	25%
Web page	13	17%
Signage	10	13%
Staff	8	11%
Screen saver	3	4%
Library Handbook	1	1%
Mail out flyer to all students	1	1%

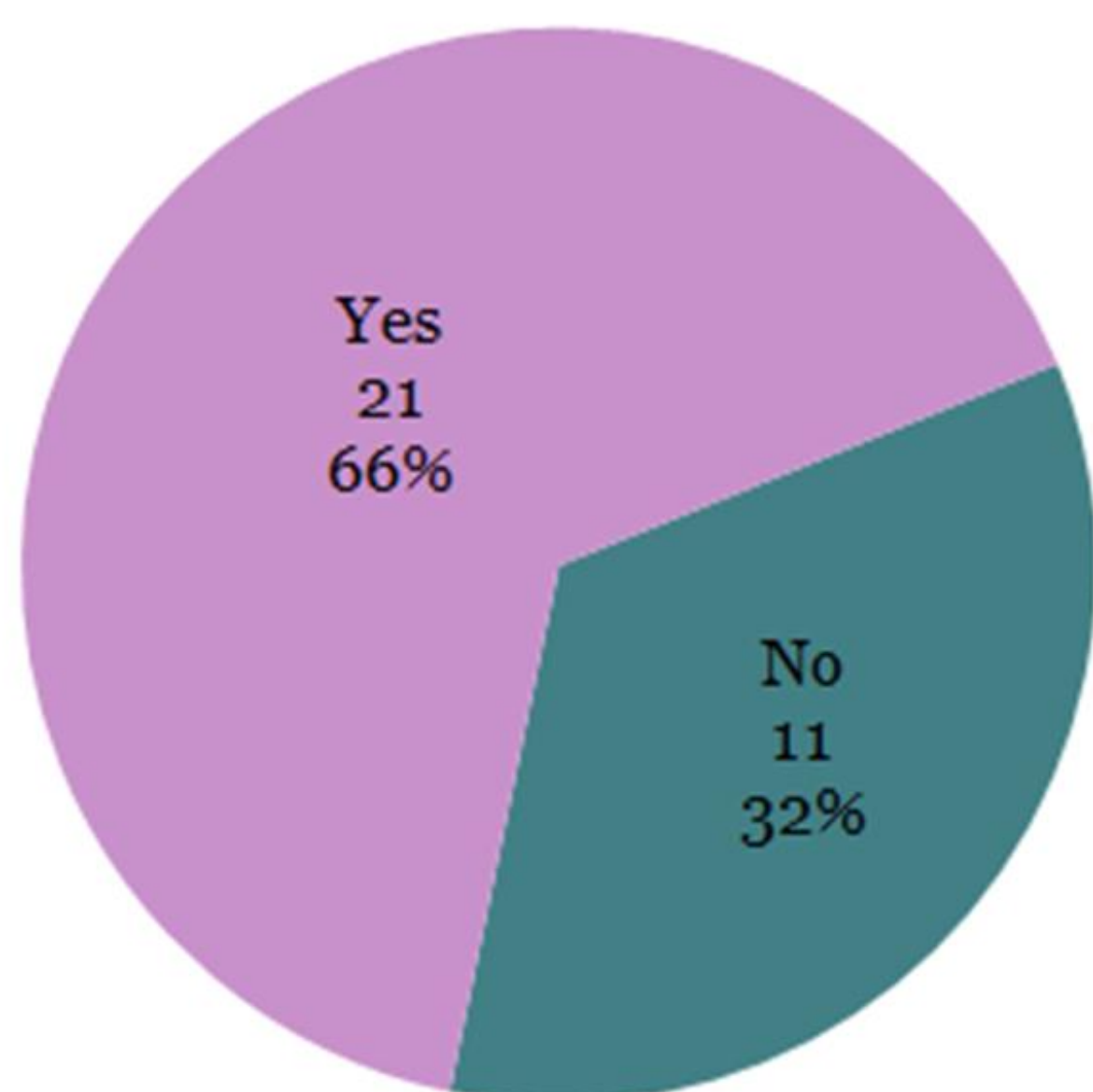
Handle User Privacy of Authentication?
(75 Authenticating Libraries)

Privacy method	Number	Percentage of those that Authenticate
Identified access (none)	50	67%
Anonymous access (each session is anonymous with repeat users not identified)	21	28%
Pseudonymous access with demographic identification (characteristics of users determined but not actually identified)	2	3%
Identified access (but not guest login - anonymous)	1	1%
Pseudonymous access (repeat users identified but not the identity of a particular user)	1	1%
Pseudonymous access (repeat users identified but not the identity of a particular user) for guest	1	1%

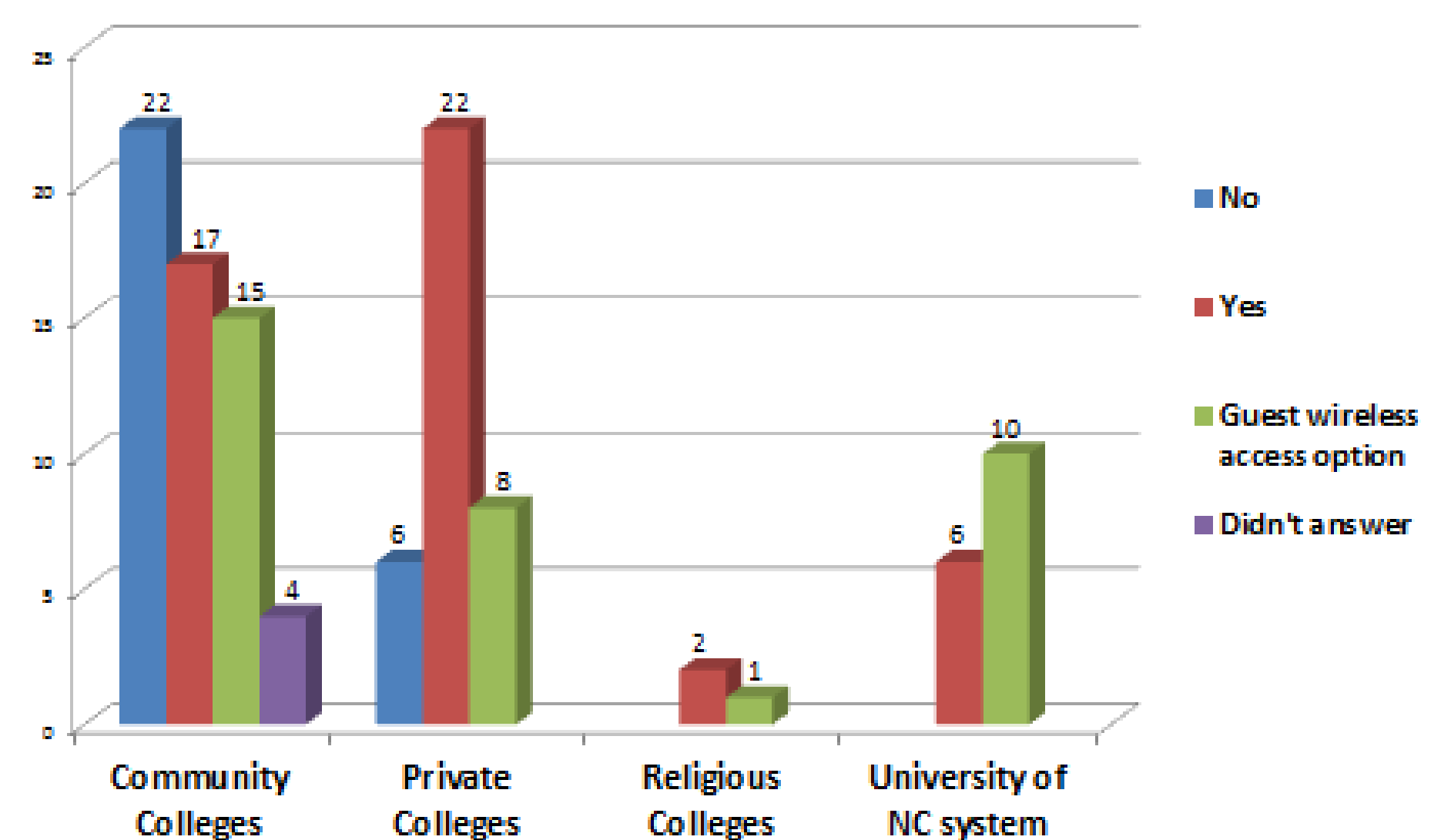
When Did You Implement Authentication?
(75 Authentication Libraries)



Authenticate the Guest or Public Use PCs
(of 32 libraries that Differentiate Between Student Only and Guest/Public Use PCs)

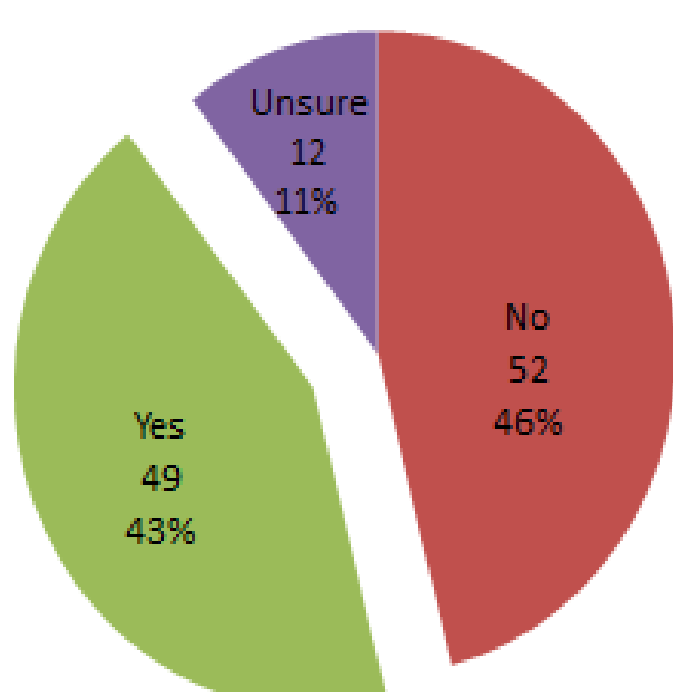


Wireless Authentication
(by type of institution)

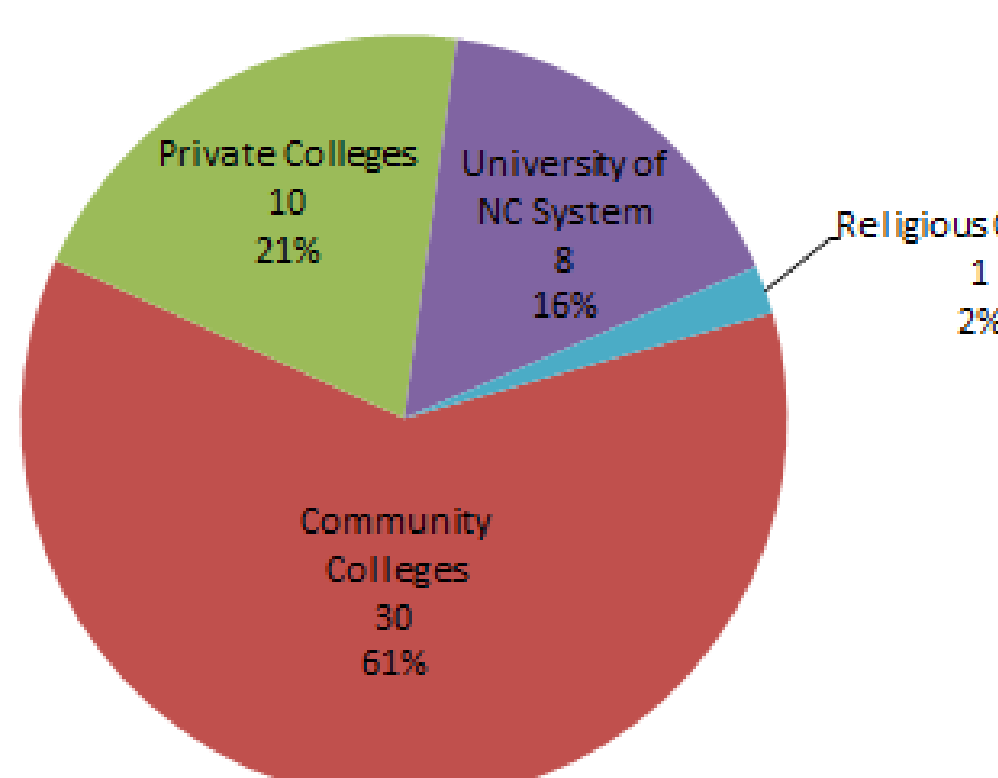


Incident Response Results

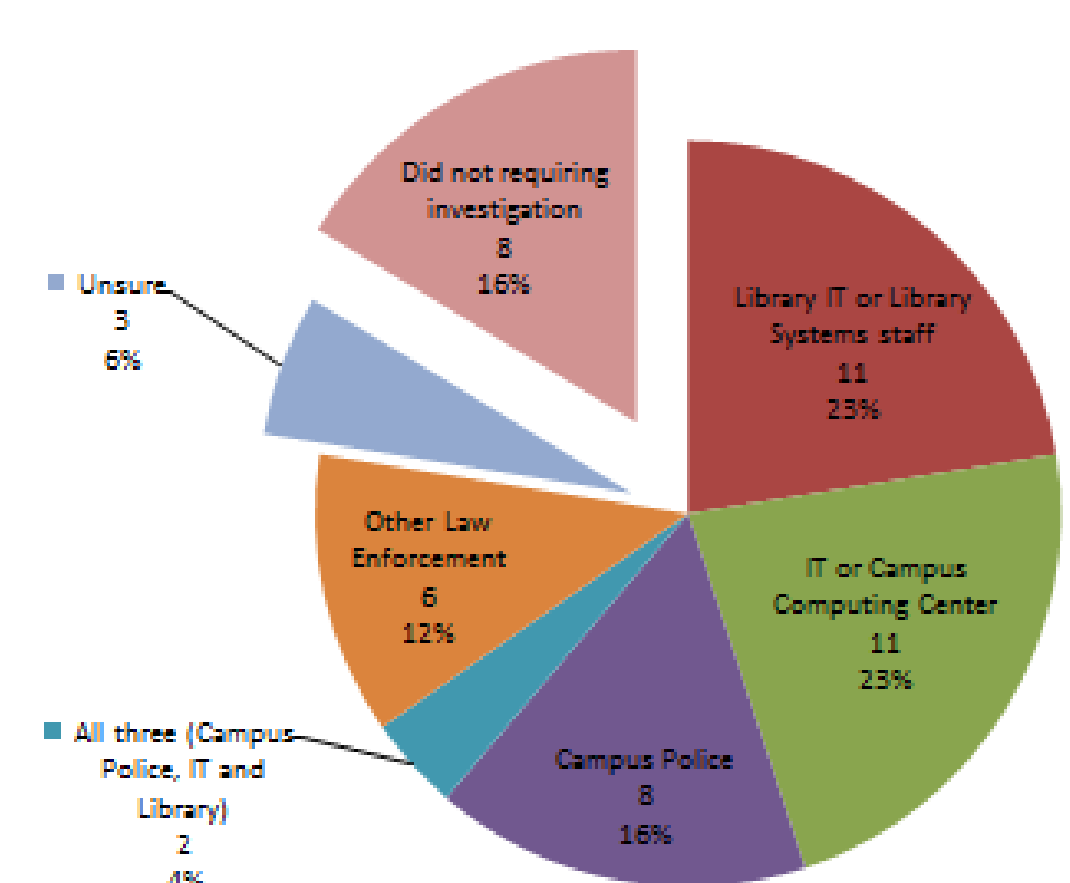
Improper Use of the Public PCs Report
(all 113 institutions)



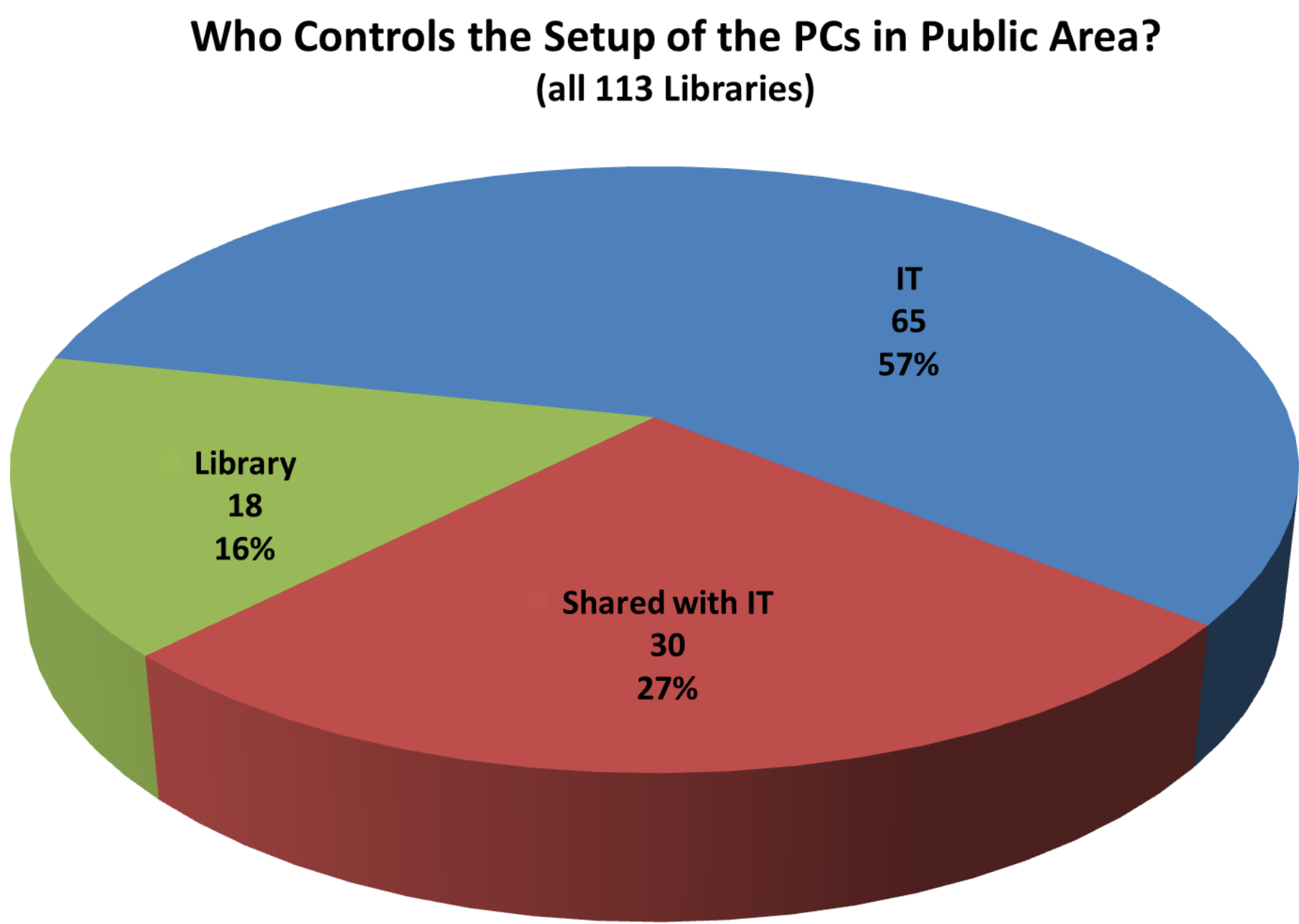
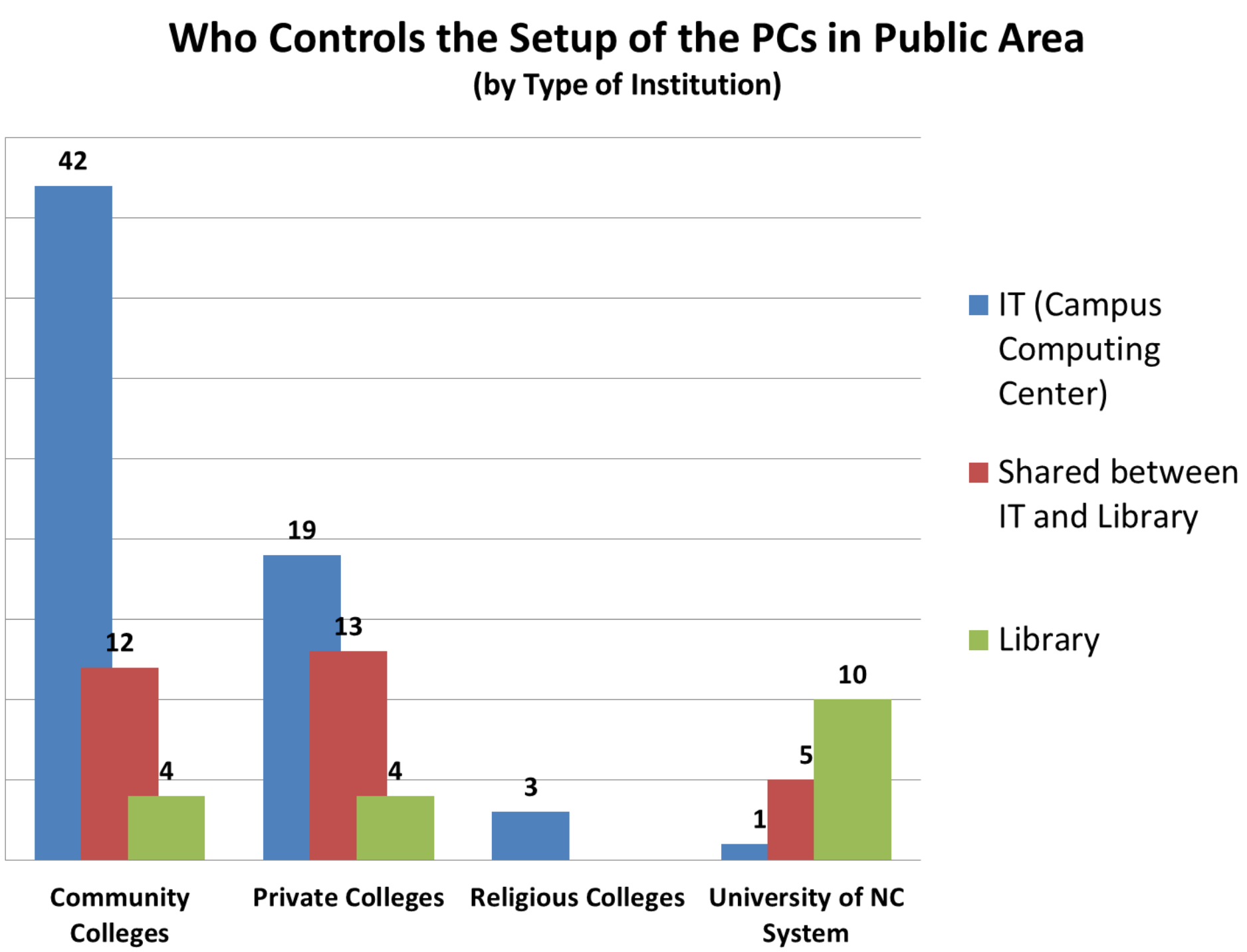
Type of Institutions Reporting Improper Use?
(Of the 49 libraries reported incidents)



Who Handled the Investigation?
(Of the 49 libraries that reported incidents)

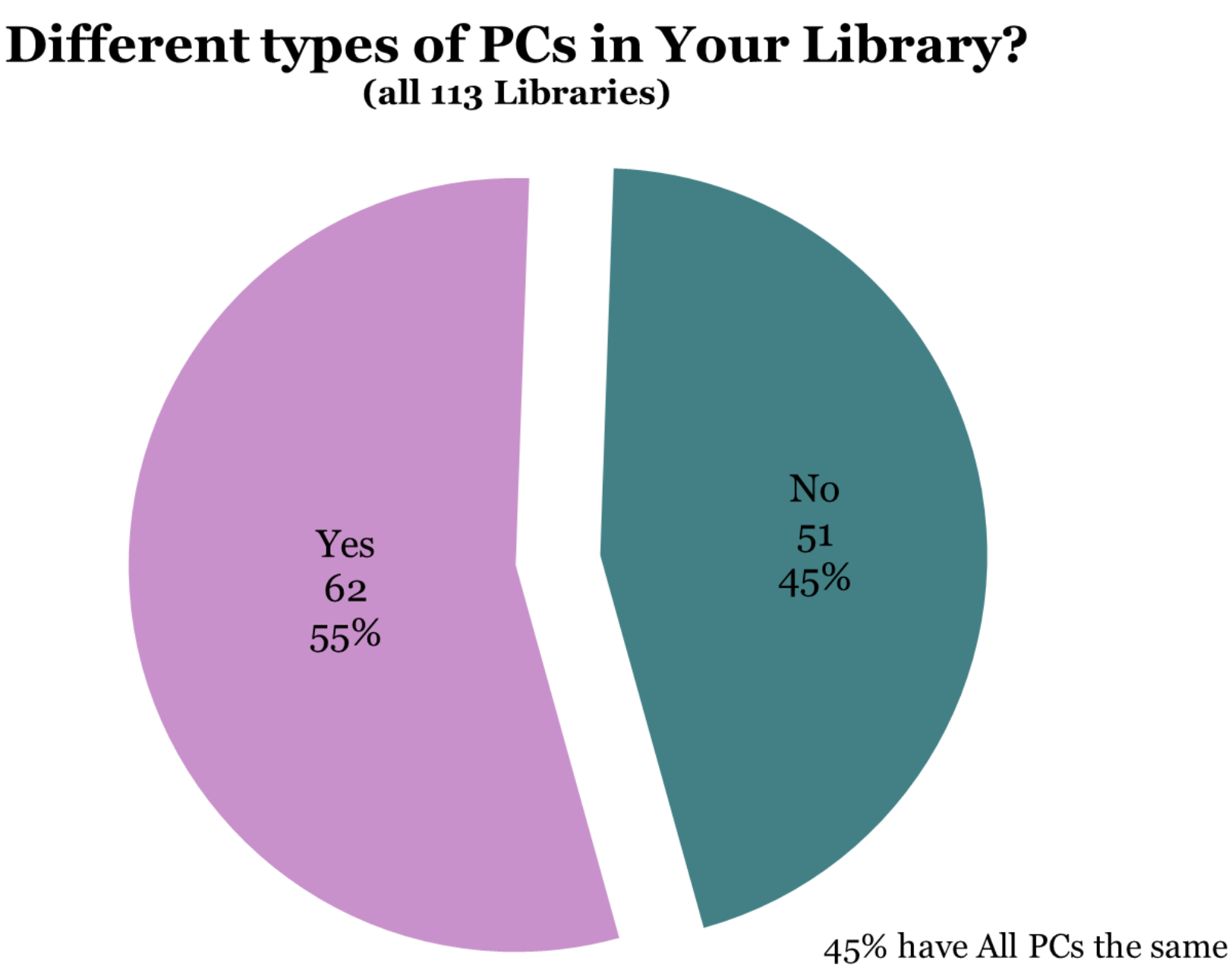


Data about the Setup of the PCs



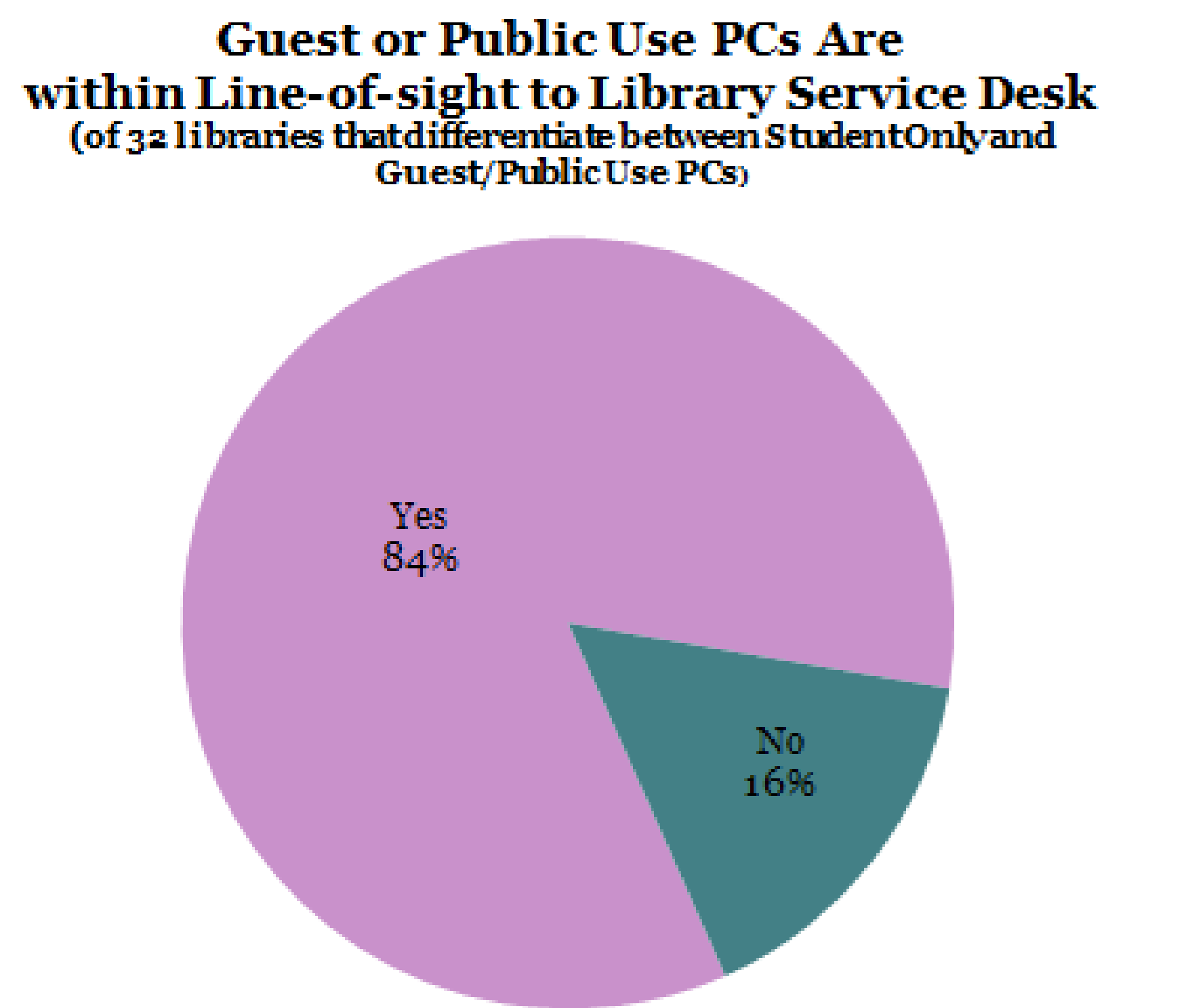
Different types of PC Setups in Public Area
(all 113 libraries)

	Number	Percentage of Total
Some have specialized equipment attached (like scanners, microfiche readers, etc)	38	34%
Some have different types of software (like Browser Only)	37	33%
Some have printing limitations	12	11%
Some have time or scheduling limitations	11	10%
Some control, limit or block web sites that can be accessed	8	7%
Some control, limit or block access to library resources (such as databases or other subscption based services)	6	5%
ADA or large screen	2	2%



How Guest or Public Use PCs are Clustered
(of 32 libraries that Differentiate Between Student Only and Guest/Public Use PCs)

	Number	Percent
All In One General Area	16	50%
Scattered Throughout the Library	3	9%
In Several Groups Around the Library	2	6%



Computer Activity Logs Results

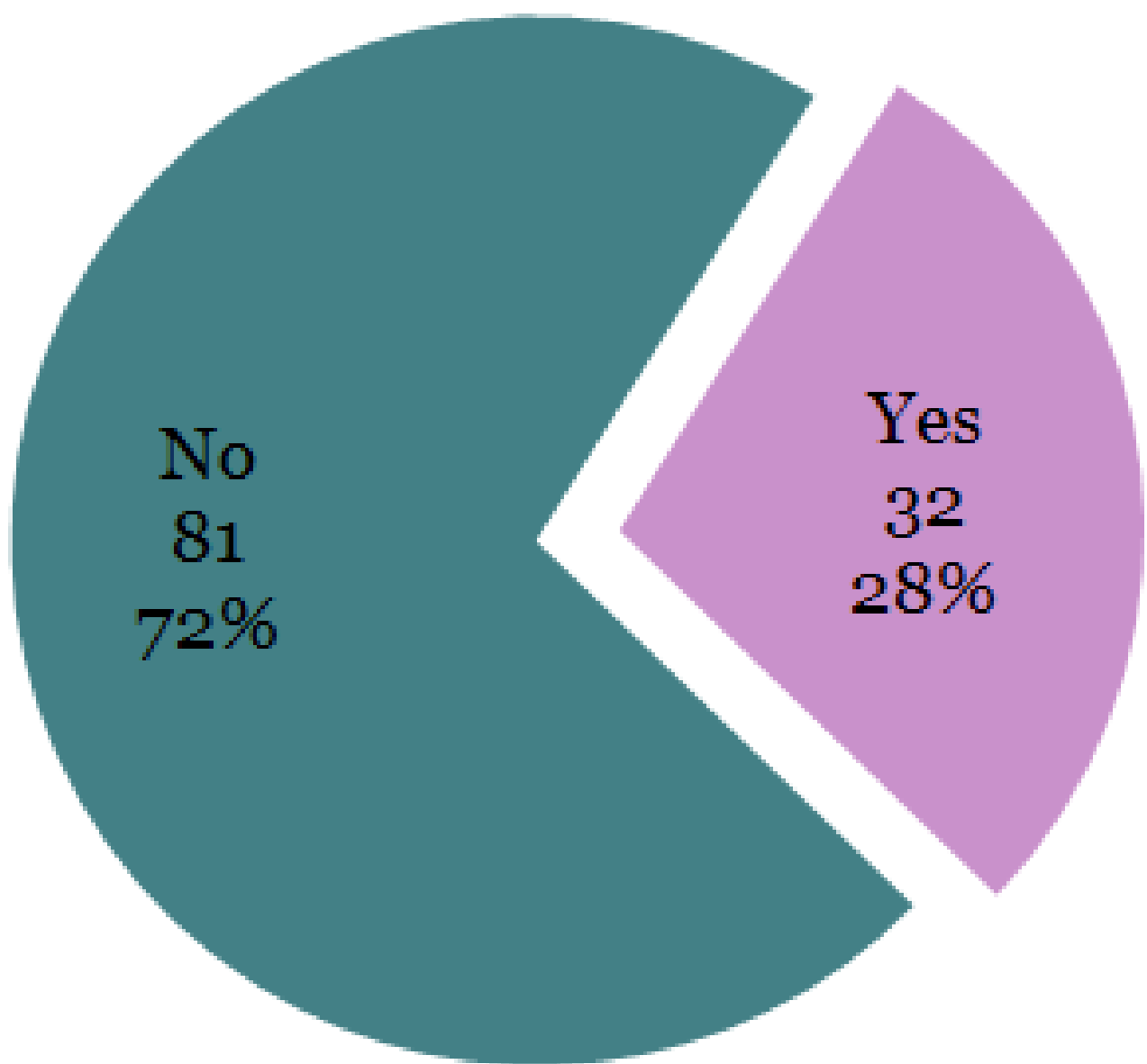
What Kind and For How Long Computer Logs are Kept
(all 113 Libraries)

Computer Activity Logs	Number	Of total libraries	Don't know how long data is kept (unsure)
Unsure	59	52%	100%
Authentication logs (who logged in)	28	25%	60%
None	21	19%	--
Browsing history (kept in centralized log files)	14	12%	86%
Scheduling logs (manual or software)	10	9%	70%
Browsing history (kept on PC after reboot)	7	6%	57%
Software use logs	6	5%	33%
Library system	4	4%	75%
Other	2	2%	--

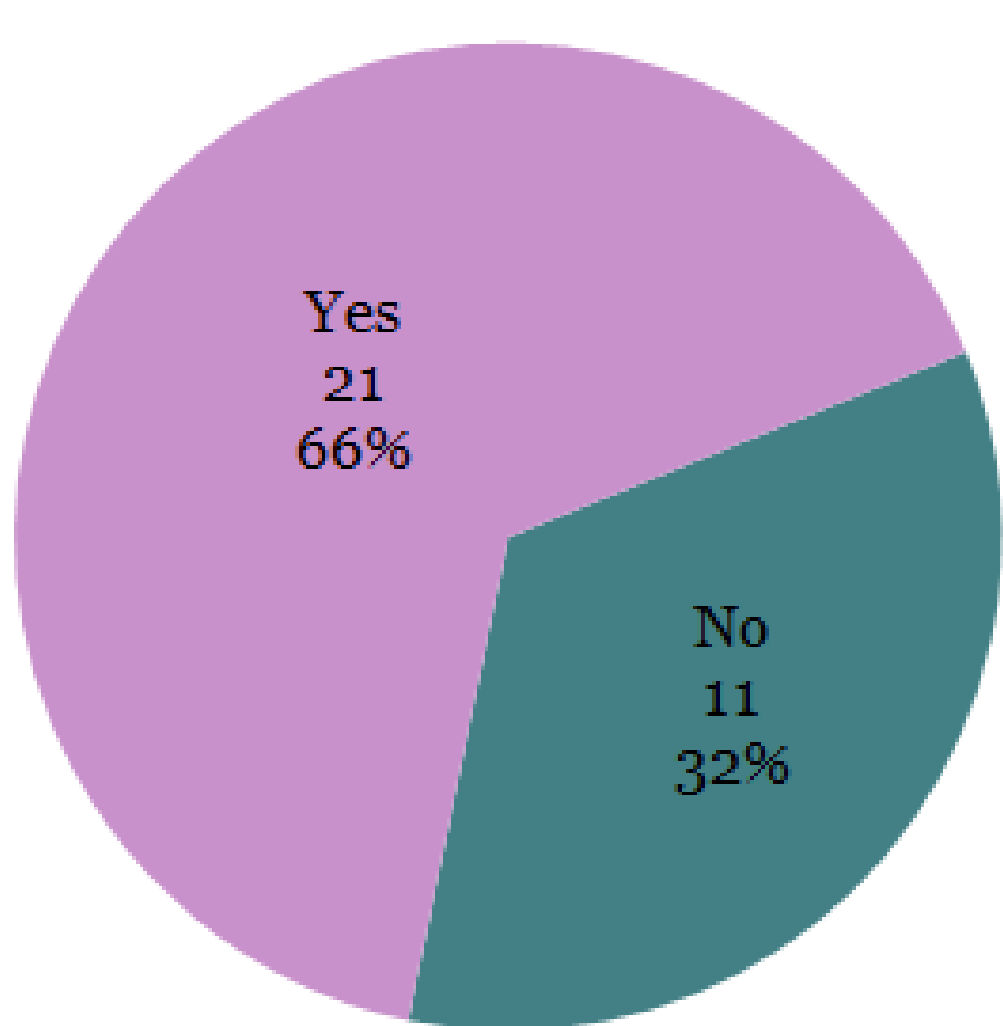


Data gathered about Guest/Public Use PCs

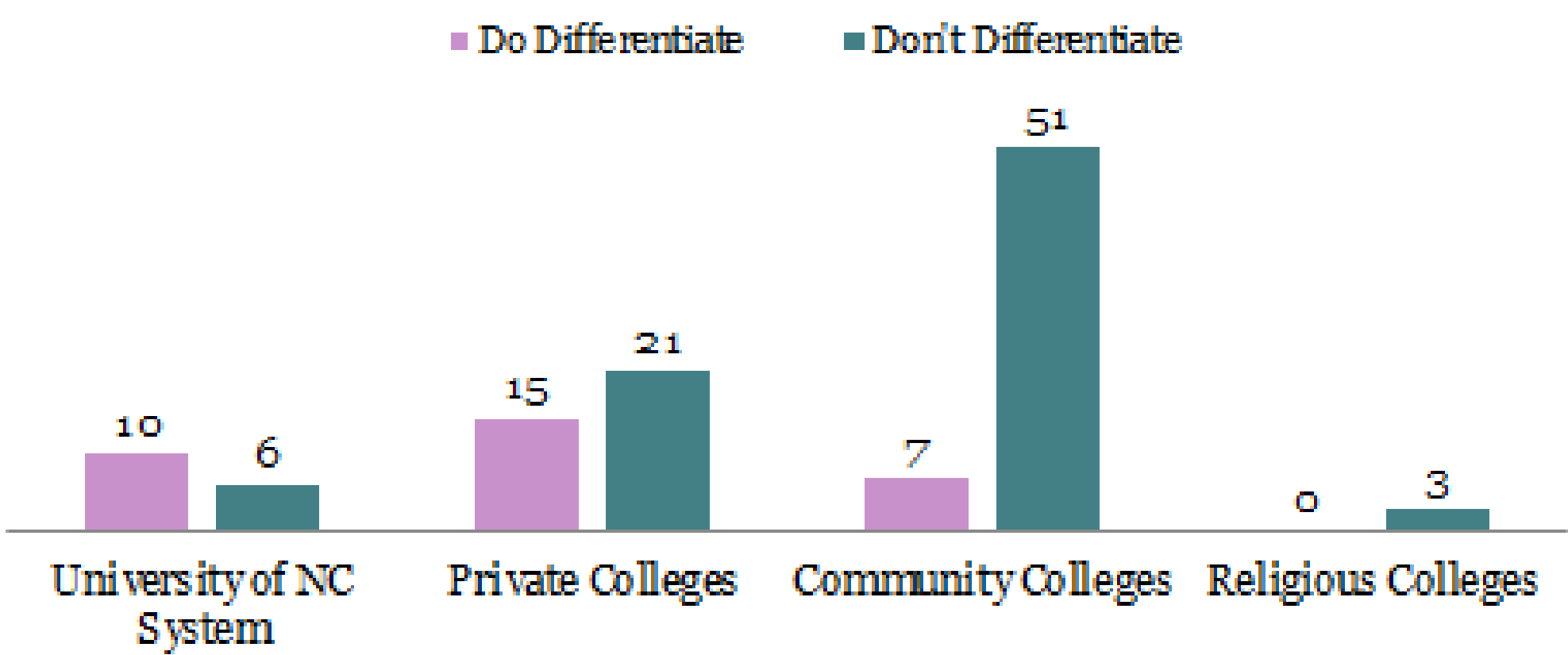
Differentiate between Student Only and Guest/Public Use PCs?
(all 113 libraries)



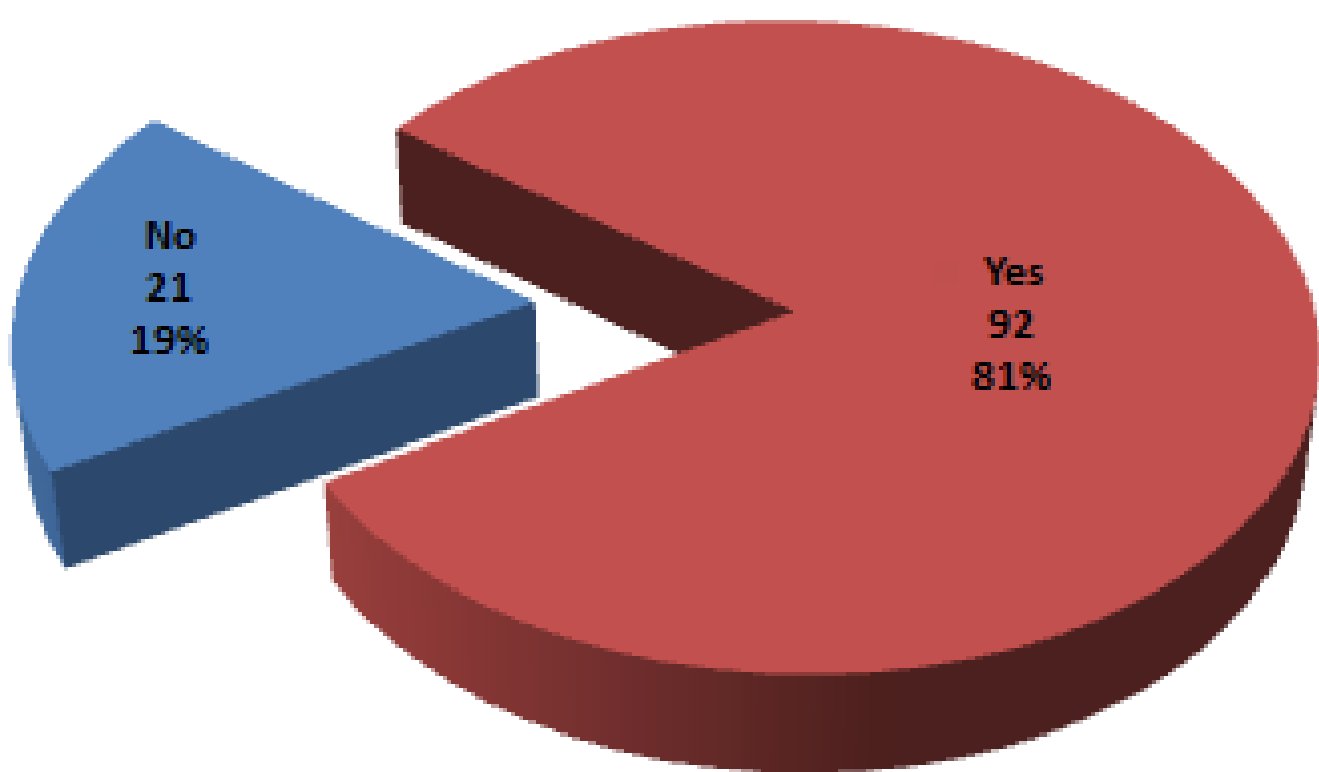
Authenticate the Guest or Public Use PCs
(of 32 libraries that Differentiate Between Student Only and Guest/Public Use PCs)



Differentiate between Student Only and Guest/Public Use PCs?
(by type of institution)



Wireless Access Given to Guests or General Public
(all 113 libraries)



Data gathered about Student Only PCs

What Authentication provides to Student Only PCs
(of 32 libraries that Differentiate Between Student Only and Guest/Public Use PCs)

Types of Access	Number	Percentage of those that Authenticate
Access to specialized software	26	81%
Printing	24	75%
Internet access	23	72%
Access to storage space	19	59%
Scanner	1	3%

How Authentication Controls Guest and Public Use PCs
(Those Differentiated and All libraries)

Limitations	Number	Of the 32 libraries that differentiate	Of all libraries responding
Internet Access Only	19	59%	17%
Limited Software	16	50%	14%
Timed or Scheduled Access	14	44%	12%
Limited or Different Charge for Printing	13	41%	12%
Control, Limit or Lock Access to Library Resources (such as databases or other subscription based services)	4	13%	4%
Control, Limit or Block Web Sites that Can Be Accessed	3	9%	3%

Authentication Issues seen on Student Only PCs
(of 32 libraries that Differentiate Between Student Only and Guest/Public Use PCs)

Authentication Issues	Number	Percentage of those that Authenticate
Users forgetting to log out of a sessions (94% require students to log out)	28	88%
ID management issues from the user (ie, like forgetting passwords)	18	56%
ID management issues from the network (ie, updating changes in timely fashion)	6	19%
Timing out issues (31% User is timed out)	6	19%
Authentication system become not available	7	22%

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