

Bentley-Watchfire® Survey of Online Privacy Practices in Higher Education

Final Report

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## Table of Contents

Executive Summary.....	3
Introduction.....	5
Methodology.....	6
Findings from Automated Scan.....	6
Findings from Manual Survey of Privacy Policies.....	7
Discussion & Recommendations.....	9
Appendix A: Sample.....	12
Appendix B: Data Tables.....	16
Appendix C: Fair Information Practices.....	25
Appendix C: Coding Form for Manual Survey.....	26

## Executive Summary

Because many colleges and universities now use the Internet to process electronic applications and other types of ecommerce transactions, privacy has emerged as an important risk management issue for higher education. This study represents a benchmark study of online privacy practices in higher education, based on a survey of the top 236 doctoral universities and national liberal arts colleges from the 2004 *US News and World Report* list of best colleges.

The study is modeled after the prior surveys of online privacy notices posted by .com websites initiated by the Federal Trade Commission in 1998 but with an important difference. Like these prior studies, our survey is based on a content analysis of online privacy notices. However, we also conducted an automated audit of the websites in our sample using Watchfire's WebXM™ Privacy Module to assess whether or not these sites engaged in practices that may pose privacy risks.

The automated audit focused on three types of privacy risks: privacy statement use, data collection forms, and cookies. For each school, we scanned approximately 200 pages each from the starting URL for the homepage and from four other sections of the websites which are likely to collect personal information: undergraduate admissions, athletics, alumni, and employment/HR. Overall we found:

- 100% of both doctoral universities and liberal arts colleges had at least one instance of a web page without a link to a privacy notice (average = 587 pages/school);
- Nearly 100% of both doctoral universities and liberal arts colleges had at least one data collection form on a page without a link to a privacy notice (average = 177 pages/school);
- Nearly 100% of both doctoral universities and liberal arts colleges had at least one data collection form that used the GET method to submit the data (average = 209 pages/school);
- 100% of both doctoral universities and liberal arts colleges had at least one non-secure page with a data collection form (average = 424 pages/school); and
- The schools in our sample made limited use of cookies. Only 14% used first party-cookies without a P3P compact policy, and only 4% used third party cookies.

For the manual survey, we did a content analysis of the 65 home page privacy notices (28%) that were linked from the home page. We analyzed each notice to determine to what extent the notice reflected fair information practices. We found:

For all 65 privacy notices:

1. Does the notice contain a statement **defining the scope** of the notice (63%)?
2. Does the notice contain **contact information** for privacy concerns (66%)?
3. Does the notice contain a statement about how **changes to the notice** are handled (20%)?
4. Does the notice include a **privacy seal** (no schools)?
5. **Notice:** Does the privacy notice describe whether or not the site collects personal information (85%)?

For the 51 schools which collect personal information:

6. **Notice:** Does the privacy notice state what personal information is collected (49%) and how the information is used (90%)?
7. **Cookies:** Does the privacy notice describe how the site uses cookies or web bugs (59%)?
8. **Onward transfer:** Does the privacy notice say whether or not the school shares personal information when required by law (53%) or with third party affiliates (53%)?
9. **Choice:** If the school says it reuses personal information for correspondence or marketing (n=25), does it offer an opt out (52%)?
10. **Access:** Does the notice describe how users can access their personal information (33%)?
11. **Security:** Does the notice contain a statement saying how the site protects personal information (61%)?

We also collected three forms of readability data for all 65 notices: the Flesch-Kincaid grade level score (average = 9.35), the length of the notice in words (average = 736 words), and whether or not the notice contained any internal links to facilitate navigation (yes = 14%).

\* \* \* \* \*

Acknowledgments: Watchfire® collected the data for the automated portion of the study. We acknowledge the helpful assistance of Chris Stewart, Lisa Alexander, and Leslie Deamer of Watchfire for their contribution to the automated portion of the analysis. Watchfire audited the websites in the sample with its WebXM™ Privacy Module which was used to scan the websites for risk issues including missing privacy statements, insecure data collection forms, and cookie presence. WebXM Privacy can be used to help organizations ensure that their data collection practices are in-line with their stated policies.

## Introduction

This project represents a benchmark study of online privacy practices in higher education based on a survey of the top 236 doctoral universities and national liberal arts colleges in the United States. The study is modeled after the prior surveys on online privacy notices posted by .com websites initiated by the Federal Trade Commission in 1998, but with an important difference. Like these prior studies, our survey is based on a content analysis of online privacy notices. However, it differs from the prior studies in one important way: we also conducted an automated scan of the websites in our sample to measure whether or not these sites engaged in practices that may pose privacy risks.

Why is this important? The public continues to express high levels of concern about online privacy. Recently, these concerns have been fueled by publicity about identity theft. Higher education is not immune from these events and a number of widely-publicized recent cases involved data breaches at some of the country's leading colleges and universities. For example, data collected by the Office of Privacy Protection in California found that since 2003, universities and colleges in that state accounted for approximately 28% of security breaches in California, more than any other group including financial institutions.<sup>1</sup> A 2005 survey conducted by Princeton Survey Research found that due to new concerns about identity theft, a majority of consumers have stopped giving out personal information on the internet, 30% say they have reduced their overall use of the Internet, and 25% say they have stopped buying things online<sup>2</sup>. Other research found that people use privacy notices as an important way to manage the risk of disclosing personal information online.<sup>3</sup>

Privacy was not a major issue when higher education websites largely consisted of “brochureware.” However, today many colleges and universities process electronic applications and respond to inquiries, accept online donations, and sell clothing, textbooks and athletic tickets over the Internet – the same types of commercial activities that potentially raise privacy concerns in the private sector. As a result, privacy now represents an important risk management issue for higher education.

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<sup>1</sup> Tom Zeller, Jr., “Some Colleges Falling Short in Security of Computers,” *New York Times*, April 4, 2005.

<sup>2</sup> Princeton Survey Research, *Leap of Faith: Using the Internet Despite the Dangers*, 2005. Available at: [www.consumerwebwatch.org/dynamic/web-credibility-reports-princeton.cfm](http://www.consumerwebwatch.org/dynamic/web-credibility-reports-princeton.cfm)

<sup>3</sup> George R. Milne and Mary J. Culnan, “Strategies for Reducing Online Privacy Risks: Why Consumers Read [or Don't Read] Online Privacy Notices,” *Journal of Interactive Marketing*, 18, 3, p. 15-29, Summer 2004.

## Study Methodology & Findings

### Overview

The study sample consisted of the top 236 schools from the *US News and World Report* 2004 list of best colleges.<sup>4</sup> The sample consisted of two types of schools: 129 national doctoral universities, and 107 national liberal arts colleges. Appendix A contains the ranked lists of these schools. We collected two types of data about the schools in our sample. First, during spring 2005 we conducted an automated audit of the websites for all 236 schools using Watchfire's WebXM™ Privacy Module. Second, during fall 2005, we conducted a manual survey of all schools which had a home page privacy notice linked from their home page.

### Automated Scan

The Privacy Module of WebXM™ is an automated tool that helps organizations identify potential risks related to the ways they collect and use personal information online<sup>5</sup>. In addition to the home page, the automated scan focused on four other sections of the websites which are likely to collect personal information: undergraduate admissions, athletics, alumni, and employment/HR. For each school in our sample, we identified and recorded the URL for the homepage as well as a starting URL for each of the other four sections. Watchfire then ran five scans for each school; each scan analyzed approximately 200 web pages from each of the starting URLs and a total of 174,291 pages across all schools. We looked for three types of privacy risks:

- Privacy statement use (pages without a link to a privacy notice)
- Data collection forms (pages with forms but without a link to a privacy notice, forms using GET, and non-secure pages with forms), and
- Cookies (first-party cookies without a P3P compact policy, and third-party cookies).

When the scans were completed, the individual results were downloaded into a spreadsheet which we used to calculate aggregated statistics. Tables 1-6 in Appendix B contain detailed results for the automated scan including the results for the individual sections of the websites as well as overall results for both doctoral universities and liberal arts colleges. Overall, the automated analysis found that:

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<sup>4</sup> The original list consisted of 238 schools. Two schools were eliminated because of difficulties accessing their websites.

<sup>5</sup> See: [www.watchfire.com/products/webxm/default.aspx](http://www.watchfire.com/products/webxm/default.aspx)

- **100% of both doctoral universities and liberal arts colleges had at least one instance of a web page without a link to a privacy notice (average = 587 pages/school).** Fair information practices state that people should be told what personal information is being collected and how it is used. The generally accepted method for implementing the notice principle of fair information practices for online privacy is to link to the site's privacy notice on the home page and on all pages where personal information is collected. Given that many sites collect passive information about users as they travel through the site (e.g. server log data), ideally the link to the privacy policy should appear at the bottom of each page that is governed by the policy.
- **Nearly 100% of both doctoral universities and liberal arts colleges had at least one data collection form on a page without a link to a privacy notice (average = 177 pages/school).** While efforts were made to eliminate search forms from the forms counted by the automated scan, it is likely that the results include some false positives. However, given the number of instances per school, it is also likely that some of these forms were used to gather personal information.
- **Nearly 100% of both doctoral universities and liberal arts colleges had at least one data collection form that used the GET method to submit the data (average = 209 pages/school).** The end result of the use of this method is that the information sent back to the website will appear in the browser's history file and in the web server log files, creating an increased risk of identity theft if the information is sensitive (e.g. credit card number, usernames, or passwords).
- **100% of both doctoral universities and liberal arts colleges had at least one non-secure page with a data collection form (average = 424 pages/school).** Again, it is likely that at least some of these forms were used to transmit sensitive information across the Internet without adequate security.

The schools in our sample made limited use of cookies to track users. Third-party cookies were found on the websites of only 4% of schools while only 14% of schools overall used first party cookies, either persistent or session, without a P3P compact policy somewhere on their website. In the latter case, failure to post a P3P compact policy can potentially result in website visitors using Internet Explorer 6 receiving a warning message about a cookie being blocked. In both instances, it is important that the school disclose its use of cookies in their privacy notice.

#### Manual Survey

The manual survey consisted of two parts. First, we did a manual search for privacy notices in each section (home page, undergraduate admissions, alumni, athletics, and employment/HR). If we found a privacy notice, we recorded the URL, downloaded a copy of

the policy, and noted for schools with a home page privacy notice, whether or not these additional privacy policies matched the homepage notice, or if the notice was posted by a third party. Table 7 in Appendix B summarizes the results for privacy notices by type of school.

Only 36% of the schools overall (40% doctoral universities and 21% liberal arts colleges) had a privacy notice that could be accessed from the home page either by a link on the page, by using a dropdown menu, or by doing a search. Of these 85 home page privacy notices, only 65 were linked from the home page, and of these 65, the link for only 53 of the sites was explicitly labeled as “privacy.” Further, the notices posted on other sections of the sites differed from the home page privacy notice for a number of schools. For example, 50 schools posted a privacy notice for the undergraduate admissions section of their website, but only 41 of these policies were the same as the privacy policy posted on the home page. Finally, an additional 39 schools or 17% of the sample had privacy notices on other sections of the site, but no home page privacy notice.

Second, we did a content analysis of the 65 home page privacy notices that were linked from the home page. The analysis was conducted during the fall 2005.<sup>6</sup> We analyzed each notice to determine to what extent the notice reflected fair information practices (see Appendix C for an overview of fair information practices). In addition, each notice was reviewed a second time to ensure each notice was coded consistently. Our survey form was adapted from the form used in the FTC’s 2000 Online Privacy Survey.<sup>7</sup> Appendix D contains a copy of our survey form.

We counted whether the privacy notice contained the following elements:

For all 65 privacy notices:

1. Does the notice contain a **definition of its scope** (63% overall)?
2. Does the notice contain **contact information** for privacy concerns (66%)?

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<sup>6</sup> Because the privacy notices in our sample were downloaded approximately a year before they were analyzed, we reviewed the home pages for all 236 schools in December 2005. At this point, eight schools had added a link to some type of privacy notice to their home pages. In addition, one school eliminated the privacy notice that was linked from its home page when we first collected our data, and the URL’s for six of the privacy notices we analyzed had changed, suggesting that these schools either updated their notices or redesigned their websites. Because we believed these changes did not significantly alter our overall findings, we did not analyze any of the new notices we found in 2005.

<sup>7</sup> Federal Trade Commission, Privacy Online: Fair Information Practices in the Electronic Marketplace, May 2000, available at: [www.ftc.gov/reports/privacy2000/privacy2000.pdf](http://www.ftc.gov/reports/privacy2000/privacy2000.pdf)

3. Does the notice contain a statement about how **changes to the notice** are handled (20%)?
4. Does the notice include a **privacy seal** (no schools)?
5. **Notice:** Does the privacy notice describe whether or not the site collects personal information (85%)?

For the schools which say they collect personal information (n=51):

6. **Notice:** Does the notice state what personal information is collected (49%) and how the information is used (90%)?
7. **Cookies:** Does the privacy notice describe how the site uses cookies or web bugs (59%)?
8. **Onward transfer:** Does the privacy notice say whether or not the school shares personal information when required by law (53%) or with third party affiliates (53%)?
9. **Choice:** If the school says it reuses personal information for correspondence or marketing (n=25), does it offer an opt out (52%)?
10. **Access:** Does the notice describe how users can access their personal information (33%)?
11. **Security:** Does the notice contain a statement saying how the site protects personal information (61%)?

We also collected three forms of readability data for all 65 notices: the Flesch-Kincaid grade level score (average = 9.35), the length of the notice in words (average = 736 words), and whether or not the notice contained any internal links to facilitate navigation (14%). Table 8 in Appendix B contains the full results of the manual survey.

#### Discussion and Recommendations

This study was intended as an exploratory survey of online privacy practices in higher education. The results of the automated scan suggest that nearly all of these institutions engage in some practices online that pose a potential privacy risk. The results of the manual survey indicate that less than one-third of America's leading colleges and universities have a privacy notice accessible from their home page, and that many of these notices fail to include the core elements of fair information practices.

For schools wishing to address online privacy issues, the California Online Privacy Protection Act of 2003 describes a set of baseline requirements that can serve as a starting point.<sup>8</sup> The California law requires any entity that collects personally identifiable information from California residents through an Internet website for commercial purposes to conspicuously post a privacy notice on its website and to comply with its privacy policy as described in the privacy notice. “Conspicuously” means there is a link to the privacy notice that is accessible from the home page/first page of the site and all pages that collect personal information. Specifically, the law requires the privacy notice to:

- Identify the categories of personal information collected through the website;
- Identify the categories of third parties with whom the organization may share personal information;
- Describe the process for individuals to access their personal information and request changes if the organization has such a process;
- Describe how the organization notifies people who use their website of material changes to the privacy policy; and
- Identify the effective date of the policy.

In our study, typical examples where schools collected personal information included system-generated information used to manage the site, email inquiries where personal information was used to respond to the inquiry, e-commerce applications where personal information was used to process the transaction, or cookies.

While not required by the law, it is highly desirable to include three additional types of information in the notice. First, the privacy notice should specify the scope of the notice. Second, given the public concern about identity theft, it is good to contain a general statement that your site protects personal information during transmission as well as during storage and use. Third, it is desirable to include contact information in case visitors to the website have questions about the privacy notice or the site’s information practices more generally.

Next, for privacy notices to be useful, they must be readable by the people who visit the website. This means the privacy notice should be written at an appropriate grade level, and should be easy to navigate. The privacy notices in our sample, on average, were written at a

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<sup>8</sup> See: [www.privacy.ca.gov/lawenforcement/laws.htm/#six](http://www.privacy.ca.gov/lawenforcement/laws.htm/#six) for the text of the law.

ninth grade level which is appropriate for the audience.<sup>9</sup> However, despite the fact that the average length of the 65 notices in our sample was 735 words or the equivalent of nearly three pages of text, only nine of these sites used any internal links in their notices to promote navigation.

Finally, privacy notices represent the public face of an organization's privacy policy – the rules that govern the collection and use of personal information. While the privacy notice “says what we do” with personal information, it is critical that the notice is backed up with an ongoing governance process to ensure that a school's practices are consistent with its privacy notice—that is, you “do what you say.” As stated above, the California law requires organizations to comply with their privacy notices, and the FTC has sanctioned some highly visible private sector companies whose practices were found to be at odds with the statements they made in their privacy notices.

One of the particular challenges of managing privacy in higher education is the fact that most schools operate in a decentralized information environment with norms of academic freedom that do not exist in the private sector. Departments often operate their own servers and run their own websites; individual faculty and students as well as student organizations also have personal websites that run on department servers or servers managed by the school. A scope statement in the privacy notice is one way to address this issue. The scope statement should state which URL's or domains are covered by the privacy notice, and what types of pages are not covered such as personal websites, surveys or blogs and chatrooms. If portions of the site are hosted by a third party, the notice should state whether or not the notice governs the practices of the school's business partners. Automated tools such as Watchfire's WebXM™ can subsequently be used to audit data collection practices across even large, decentralized web environments and flag potentially risky practices for review. However, it is a worthy goal for all schools to strive to ensure that all the web pages they host post and abide by a privacy policy based on fair information practices.

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<sup>9</sup>This is in contrast with commercial websites. In a recent longitudinal study of 312 of the top .com websites, average readability in 2003 was grade 12.3, with approximately half of the notices written above a high school graduate level. See Milne, G.R. and M.J. Culnan, “A Longitudinal Assessment of Online Privacy Notice Readability,” *Journal of Public Policy & Marketing*, forthcoming Fall 2006.

## APPENDIX A: Sample

### Ranked List of *U.S. News & World Report* Top Doctoral Universities for 2004

1	Harvard University (MA)	41	Georgia Institute of Technology
1	Princeton University (NJ)	42	University of California – Davis
3	Yale University (CT)	43	Tulane University (LA)
4	University of Pennsylvania	43	University of California – Irvine
5	Duke University (NC)	45	Univ. of California – Santa Barbara
5	Massachusetts Inst. of Technology	46	Rensselaer Polytechnic Inst. (NY)
5	Stanford University (CA)	46	University of Texas – Austin
8	California Institute of Technology	46	University of Washington
9	Columbia University (NY)	46	Yeshiva University (NY)
9	Dartmouth College (NH)	50	Pennsylvania State U. – University Park
11	Northwestern University (IL)	50	University of Florida
11	Washington University in St. Louis	52	George Washington University (DC)
13	Brown University (RI)	52	Pepperdine University (CA)
14	Cornell University (NY)	52	Syracuse University (NY)
14	Johns Hopkins University (MD)	55	Worcester Polytechnic Inst. (MA)
14	University of Chicago	56	Boston University
17	Rice University (TX)	56	Univ. of Maryland – College Park
18	University of Notre Dame (IN)	58	Rutgers – New Brunswick (NJ)
18	Vanderbilt University (TN)	58	University of Georgia
20	Emory University (GA)	58	University of Iowa
21	University of California – Berkeley	58	University of Miami (FL)
22	Carnegie Mellon University (PA)	62	Miami University – Oxford (OH)
22	University of Michigan – Ann Arbor	62	Ohio State University – Columbus
22	University of Virginia	62	Purdue Univ. – West Lafayette (IN)
25	Georgetown University (DC)	62	Texas A&M Univ. – College Station
25	Univ. of California – Los Angeles	66	University of Connecticut
27	Wake Forest University (NC)	66	University of Delaware
28	Tufts University (MA)	66	Univ. of Minnesota – Twin Cities
29	U. of North Carolina – Chapel Hill	66	University of Pittsburgh
30	Univ. of Southern California	70	Fordham University (NY)
31	College of William and Mary (VA)	71	Indiana University – Bloomington
32	Brandeis University (MA)	71	Michigan State University
32	New York University	71	Southern Methodist University (TX)
32	Univ. of Wisconsin – Madison	74	Brigham Young Univ. – Provo (UT)
35	Case Western Reserve Univ. (OH)	74	Clark University (MA)
35	Univ. of California – San Diego	74	Clemson University (SC)
37	Boston College	74	SUNY – Binghamton
37	Lehigh University (PA)	74	Univ. of California – Santa Cruz
37	U. of Illinois – Urbana - Champaign	74	University of Colorado – Boulder
37	University of Rochester (NY)	74	Virginia Tech

81	Stevens Institute of Technology (NJ)
81	St. Louis University
81	Univ. of California – Riverside
84	Baylor University (TX)
84	Iowa State University
86	American University (DC)
86	North Carolina State U. – Raleigh
86	University of Alabama
86	Univ. of Missouri – Columbia
90	Auburn University (AL)
90	Howard University (DC)
90	Marquette University (WI)
90	University of Denver
90	University of Kansas
90	University of Tennessee
90	University of Tulsa (OK)
90	University of Vermont
98	Ohio University
98	SUNY College Environmental Science and Forestry
98	Texas Christian University
98	University of Arizona
98	University of Dayton (OH)
98	Univ. of Massachusetts – Amherst
98	Univ. of Nebraska – Lincoln
98	University of New Hampshire

106	Drexel University (PA)
106	Illinois Institute of Technology
106	SUNY – Stony Brook
106	University of Missouri – Rolla
106	University of San Diego
111	Catholic University of America (DC)
111	Florida State University
111	Loyola University Chicago
111	University of San Francisco
111	University of the Pacific (CA)
111	University of Utah
117	Colorado State University
117	University of Oregon
117	Univ. of South Carolina – Columbia
120	Michigan Technological University
120	New School University (NY)
120	Northeastern University (MA)
120	Seton Hall University (NJ)
120	University at Buffalo – SUNY
120	University of Arkansas
120	University of Kentucky
120	University of Oklahoma
120	University of St. Thomas (MN)
120	Washington State University

Ranked List of *U.S. News & World Report* Top Liberal Arts Colleges for 2004

1	Williams College (MA)	42	DePauw University (IN)
2	Amherst College (MA)	42	Occidental College (CA)
2	Swarthmore College (PA)	45	Gettysburg College (PA)
4	Wellesley College (MA)	45	Rhodes College (TN)
5	Carleton College (MN)	45	Skidmore College (NY)
5	Pomona College (CA)	48	Sarah Lawrence College (NY)
7	Bowdoin College (ME)	48	Wabash College (IN)
7	Davidson College (NC)	50	Denison University (OH)
9	Haverford College (PA)	51	Wheaton College (IL)
9	Wesleyan University (CT)	51	Willamette University (OR)
11	Middlebury College (VT)	53	Agnes Scott College (GA)
12	Vassar College (NY)	53	Beloit College (WI)
13	Claremont McKenna College (CA)	53	Illinois Wesleyan University
13	Smith College (MA)	53	Kalamazoo College (MI)
13	Washington and Lee University (VA)	53	Lawrence University (WI)
16	Colgate University (NY)	53	Reed College (OR)
16	Grinnell College (IA)	59	College of Wooster (OH)
16	Harvey Mudd College (CA)	59	Drew University (NJ)
19	Colby College (ME)	59	Pitzer College (CA)
19	Hamilton College (NY)	62	Southwestern University (TX)
21	Bryn Mawr College (PA)	62	St. Lawrence University (NY)
22	Bates College (ME)	62	St. Olaf College (MN)
23	Oberlin College (OH)	62	Wheaton College (MA)
24	Mount Holyoke College (MA)	66	Spelman College (GA)
24	Trinity College (CT)	66	Wofford College (SC)
26	Bucknell University (PA)	68	Hobart and William Smith Col. (NY)
26	Macalester College (MN)	68	Sweet Briar College (VA)
26	Scripps College (CA)	70	Austin College (TX)
29	Barnard College (NY)	70	Birmingham - Southern College (AL)
29	Kenyon College (OH)	70	Earlham College (IN)
31	College of the Holy Cross (MA)	70	Hendrix College (AR)
31	Lafayette College (PA)	70	Mills College (CA)
33	Colorado College	70	Muhlenberg College (PA)
33	Sewanee – University of the South (TN)	70	Ursinus College (PA)
35	Bard College (NY)	77	Gustavus Adolphus College (MN)
35	Connecticut College	77	Knox College (IL)
35	Whitman College (WA)	77	Lewis and Clark College (OR)
38	Franklin and Marshall College (PA)	77	St. John's University (MN)
38	Furman University (SC)	77	Virginia Military Institute
40	Dickinson College (PA)	83	Albion College (MI)
40	Union College (NY)	83	Allegheny College (PA)
42	Centre College (KY)	83	Randolph - Macon Woman's College (VA)

83	Washington and Jefferson Col. (PA)
87	Hollins University (VA)
87	St. Mary's College of Maryland
89	Augustana College (IL)
89	Hanover College (IN)
89	Millsaps College (MS)
89	Ohio Wesleyan University
89	Presbyterian College (SC)
89	Thomas Aquinas College (CA)
89	Washington College (MD)
96	Goucher College (MD)
96	Hillsdale College (MI)
96	Hope College (MI)
96	Principia College (IL)
101	College of St. Benedict (MN)
101	Hampshire College (MA)
101	Juniata College (PA)
101	Luther College (IA)
105	Coe College (IA)
105	Lake Forest College (IL)
105	Randolph - Macon College (VA)
105	Transylvania University (KY)
105	Wells College (NY)
105	Wittenberg University (OH)

APPENDIX B: Results

Table 1  
Automated Scan Results: Entire Site

<b>Entire Site</b>	<b>Overall Sample (n=236)</b>	<b>Doctoral Universities (n=129)</b>	<b>Liberal Arts Colleges (n=107)</b>
Total Pages Scanned in Section	174,291	100,862	73,429
Average total pages scanned per school	739	782	686
Percentage = Percent of schools with at least one instance of risk factor Mean = average pages/school with at least one instance of risk factor			
<b>Privacy Notice Use</b>			
• Pages in section without a privacy notice?	100% (mean = 587 pages)	100% (mean = 575 pages)	100% (mean=602 pages)
<b>Data Collection Forms</b>			
• No link to privacy notice	99% (mean = 177 pages)	98% (mean = 150 pages)	99% (mean = 210 pages)
• Forms using GET	97% (mean = 209 pages)	98% (mean = 211 pages)	95% (mean = 206 pages)
• Non-secure pages with forms	100% (mean = 424 pages)	100% (mean = 407 pages)	100% (mean = 446 pages)
<b>Cookies</b>			
• Schools with Third-party cookies	4%	5%	2%
• First-party cookies without a P3P policy	14%	18%	8%

Table 2  
Automated Scan Results: Home Page Section

<b>Home Page</b>	<b>Overall Sample (n=236)</b>	<b>Doctoral Universities (n=129)</b>	<b>Liberal Arts Colleges (n=107)</b>
Total Pages Scanned in Section	44,868	24,292	20,576
Average total pages scanned per school	190	188	192
Percentage = Percent of schools with at least one instance of risk factor Mean = average pages/school with at least one instance of risk factor			
<b>Privacy Notice Use</b>			
<ul style="list-style-type: none"> <li>Pages in section without a privacy notice?</li> </ul>	99% (mean = 165 pages)	99% (mean = 161 pages)	98% (mean = 170 pages)
<b>Data Collection Forms</b>			
<ul style="list-style-type: none"> <li>No link to privacy notice</li> </ul>	92% (mean = 46 pages)	90% (mean = 35 pages)	95% (mean = 59 pages)
<ul style="list-style-type: none"> <li>Forms using GET</li> </ul>	87% (mean = 44 pages)	84% (mean = 34 pages)	90% (mean = 56 pages)
<ul style="list-style-type: none"> <li>Non-secure pages with forms</li> </ul>	97% (mean = 84 pages)	96% (mean = 58 pages)	97% (mean = 115 pages)
<b>Cookies:</b>			
<ul style="list-style-type: none"> <li>Schools with Third-party cookies</li> </ul>	0%	0%	0%
<ul style="list-style-type: none"> <li>First-party cookies without a P3P policy</li> </ul>	2%	2%	2%

Table 3  
Automated Scan: Undergraduate Admissions Section

<b>Undergraduate Admissions Section</b>	<b>Overall Sample (n=236)</b>	<b>Doctoral Universities (n=129)</b>	<b>Liberal Arts Colleges (n=107)</b>
Total Pages Scanned in Section	28,116	15,824	12,292
Average total pages scanned per school	119	123	115
Percentage = Percent of schools with at least one instance of risk factor Mean = average pages/school with at least one instance of risk factor			
<b>Privacy Notice Use</b>			
• Pages without a privacy notice	92% (mean = 103 pages)	90% (mean = 106 pages)	94% (mean = 99 pages)
<b>Data Collection Forms</b>			
• No link to privacy notice	78% (mean = 34 pages)	71% (mean = 34 pages)	86% (mean = 34 pages)
• Forms using GET	56% (mean = 31 pages)	57% (mean = 26 pages)	54% (mean = 37 pages)
• Non-secure forms	86% (mean = 61 pages)	81% (mean = 53 pages)	92% (mean = 70 pages)
<b>Cookies</b>			
• Schools with Third-party cookies	1%	2%	1%
• First-party cookies without a P3P policy	6%	9%	3%

Table 4  
Automated Scan Results: Alumni Section

<b>Alumni</b>	<b>Overall Sample (n=236)</b>	<b>Doctoral Universities (n=129)</b>	<b>Liberal Arts Colleges (n=107)</b>
Total Pages Scanned in Section	35,646	21,110	14,536
Average total pages scanned per school	151	164	136
Percentage = Percent of schools with at least one instance of risk factor Mean = average pages/school with at least one instance of risk factor			
<b>Privacy Notice Use</b>			
• Pages in section without a privacy notice?	96% (mean = 119 pages)	96% (mean = 119 pages)	96% (mean = 118 pages)
<b>Data Collection Forms</b>			
• No link to privacy notice	82% (mean = 39 pages)	81% (mean = 35 pages)	83% (mean = 44 pages)
• Forms using GET	59% (mean = 39 pages)	60% (mean = 34 pages)	58% (mean = 45 pages)
• Non-secure pages with forms	90% (mean = 94 pages)	90% (mean = 82 pages)	90% (mean = 108 pages)
<b>Cookies</b>			
• Schools with Third-party cookies	1%	2%	1%
• First-party cookies without a P3P policy	4%	5%	4%

Table 5  
Automated Scan: Athletics Section

<b>Athletics</b>	<b>Overall Sample (n=236)</b>	<b>Doctoral Universities (n=129)</b>	<b>Liberal Arts Colleges (n=107)</b>
Total pages scanned in section	42,851	24,439	18,412
Average total pages scanned per school	182	189	172
Percentage = Percent of schools with at least one instance of risk factor Mean = average pages/school with at least one instance of risk factor			
<b>Privacy Statement Use</b>			
• Pages with no privacy notice	87% (mean = 113 pages)	83% (mean = 83 pages)	92% (mean = 150 pages)
<b>Data Collection Forms</b>			
• No link to privacy notice	62% (mean = 37 pages)	50% (mean = 26 pages)	90% (mean = 51 pages)
• Forms using GET	59% (mean = 73 pages)	71% (mean = 96 pages)	45% (mean = 47 pages)
• Non-secure forms	89% (mean = 148 pages)	91% (mean = 181 pages)	86% (mean = 107 pages)
<b>Cookies</b>			
• Schools with Third-party cookies	1%	2%	0%
• First-party cookies without a P3P policy	1%	0%	3%

Table 6  
Automated Scan Results: Employment/HR Section

<b>Employment/HR</b>	<b>Overall Sample (n=236)</b>	<b>Doctoral Universities (n=129)</b>	<b>Liberal Arts Colleges (n=107)</b>
Total pages scanned in section	22,810	15,197	7,613
Average total pages scanned per school	97	118	71
Percentage = Percent of schools with at least one instance of risk factor Mean = average pages/school with at least one instance of risk factor			
<b>Privacy Statement Use:</b>			
• Pages without a privacy notice?	92% (mean = 87 pages)	92% (mean = 105 pages)	91% (mean = 64 pages)
<b>Data Collection Forms</b>			
• No link to privacy notice	56% (mean = 21 pages)	64% (mean = 21 pages)	47% (mean = 22 pages)
• Forms using GET	46% (mean = 21 pages)	49% (mean = 21 pages)	43% (mean = 21 pages)
• Non-secure forms	65% (mean = 38 pages)	73% (mean = 32 pages)	55% (mean = 46 pages)
<b>Cookies</b>			
• Schools with Third-party cookies	1%	1%	0%
• First-party cookies without a P3P policy	4%	5%	3%

Table 7  
Manual Scan Results:  
Privacy Notices by Type of School

Type of Notice	Total (n= 236)	Doctoral Universities (n=129)	Liberal Arts Colleges (n=107)
<b>Home Page (% of sample)</b>			
• Privacy notice <sup>10</sup> ?	85 (36%)	52 (40%)	33 (31%)
• Notice linked from home page?	65 (28%)	43 (33%)	22 (21%)
• Link labeled as “privacy”?	53/65 (82%)	36/43 (84%)	17/22 (77%)
• Additional sites with linked home page notice but no online privacy content (excluded from sample)	6	4	2
• Sites with no home page privacy notice but notices on other sections of site	39 (17%)	30 (23%)	9 (8%)
<b>Undergraduate Admissions Section</b>			
• Privacy Notice?	50	34	16
• Same as Home Page?	41	26	15
• Third Party?	0	0	0
<b>Alumni Section</b>			
• Privacy Notice?	42	26	18
• Same as Home Page?	28	13	15
• Third Party?	0	0	0
<b>Athletics Section</b>			
• Privacy Notice?	43	31	12
• Same as Home Page?	15	4	11
• Third Party?	24	23	1
<b>Employment/HR Section</b>			
• Privacy Notice?	37	22	15
• Same as Home Page?	34	19	15
• Third Party?	0	0	0

<sup>10</sup> Note: Home page privacy notice counted if accessible from home page by a link, dropdown menu or search. Privacy notices for other sections collected only for sites with a home page privacy notice.

Table 8  
Manual Scan Results for Home Page Privacy Notices:  
Fair Information Practices by Type of School

	Total (Base=65)	Doctoral Universities (Base=43)	Liberal Arts Colleges (n=22)
<b>GENERAL</b>			
Privacy notice contains a scope statement	41 (63%)	30 (70%)	11 (50%)
Privacy notice contains contact information for privacy concerns and information	43 (66%)	31 (72%)	12 (55%)
Privacy notice contains a statement about how changes to the school's privacy policy are handled	13 (20%)	8 (19%)	5 (23%)
<b>NOTICE</b>			
Privacy notice says whether or not site collects personal information	55 (85%)	36 (84%)	19 (86%)
Privacy notice describes what personal information is collected (Base = site collects personal information)	25/51 (49%)	17/33 (52%)	8/18 (44%)
Privacy notice describes how personal information is used (Base = site collects personal information)	46/51 (90%)	29/33 (88%)	17/18 (94%)
Privacy notice describes how site uses cookies or web bugs (Base = site collects personal information)	30/51 (59%)	22/33 (67%)	8/18 (44%)
Privacy notice says whether or not school shares personal information when required by law (Base = site collects personal information)	27/51 (53%)	23/33 (70%)	4/18 (22%)
Privacy notice says school shares personal information with third party affiliates (Base = site collects personal information)	27/51 (53%)	17/33 (52%)	10/18 (56%)
Privacy notice describes how affiliates comply with privacy policy (Base = school shares personal information with third party affiliates)	5/27 (18%)	3/17 (18%)	2/10 (20%)

Table 8 (continued)  
Manual Scan Results for Home Page Privacy Notices:  
Fair Information Practices by Type of School

	Total (Base=65)	Doctoral Universities (Base=43)	Liberal Arts Colleges (n=22)
<b>CHOICE</b>			
Notice explains how to opt out of future communication (Base = school reuses personal information for correspondence or marketing)	13/25 (52%)	8/13 (62%)	5/12 (42%)
<b>ACCESS</b>			
Privacy notice describes how users access personal information collected by the website (Base = site collects personal information)	17/51 (33%)	11/33 (33%)	6/18 (33%)
<b>SECURITY</b>			
Privacy notice contains a statement that describes how personal information is protected (Base = site collects personal information)	31/51 (61%)	21/33 (64%)	10/18 (56%)
<b>READABILITY</b>			
Flesch Kincaid Grade Level Score	9.35	9.63	8.79
Length (Number of Words)	736	823	566
Privacy notice contains internal links to facilitate navigation	9 (14%)	5 (12%)	4 (18%)

Note: Percentages reflect base for each question. If no base specified, use base=65 for combined sample or base for type of school as appropriate.

## APPENDIX C

### Fair Information Practices

Fair information practices are procedures that provide individuals with control over the disclosure and subsequent use of their personal information. They balance the competing organizational and consumer interests around the use of the consumer's personal information and serve as the basis for privacy laws in the U.S. and elsewhere. While the Organization for Economic Cooperation and Development (OECD) 1980 *Guidelines on the Protection Of Privacy and Ttransborder Flows of Personal Data* reflect global norms for the ethical use of personal information, the actual coverage and implementation of fair information practices in the U.S. and elsewhere varies, reflecting cultural and legal differences.

Currently, the most widely accepted U.S. definition of fair information practices reflects a subset of the OECD *Guidelines* and is based on four elements: Notice, choice, access and security:

- **Notice** means that when individuals provide personal information, they have the right to know what, if any, information is being collected and how it will be used;
- **Choice** means that individuals should have the right to object when personal information is collected for one purpose and will be used for other unrelated purposes or shared with third parties, unless this sharing is required by law;
- **Access** means that individuals should have the right to see their information and correct errors; and
- **Security** means that organizations should be good stewards of personal information by ensuring data integrity and that data are secure from unauthorized access during both transmission and storage.

In addition, organizations should develop a reliable mechanism to ensure they abide by these principles.

Fair information practices, then, mediate privacy concerns raised by disclosure and subsequent use of personal information by empowering the individual, *even if people do not choose to invoke the procedures*. They also provide an assurance that the organization will adhere to a set of principles that most people find acceptable. As a result, they help build trust and as a result make people more willing to disclose personal information.

APPENDIX D

**Privacy Notice Coding Form: Manual Survey**

**Institution/Policy:**

1. Name of the Institution:	
2. Policy URL:	
3. Seq/ID Number:	FXXX: F=type of institution, XXX=seq in ranking
4. Type of Institution:	Natl Univ =1 Liberal Arts College = 2

**For all Yes/No, Yes=1, No = 0 (even if NA)**

**Accessibility:**

5. <b>Home Page:</b> Privacy Policy linked from Home Page? [IF NO, STOP and go on to the next school's URL]	No <input type="checkbox"/> Yes <input type="checkbox"/>
6. Privacy Policy labeled as Privacy Policy (with link text)?	No <input type="checkbox"/> Yes <input type="checkbox"/>
7. <b>Admissions:</b> Privacy policy link on front page of segment? Q7a = admissions privacy policy? (Y or N) Q7b = policy on front page for section? (Y or N) Q7c = same as HP policy? (y or n)	No <input type="checkbox"/> Yes <input type="checkbox"/>
<b>Admissions Third Party or Different Policy?</b> If 3 <sup>rd</sup> party, include name of firm	No <input type="checkbox"/> Yes <input type="checkbox"/>
8. <b>Athletics:</b> Privacy policy link on front page of segment? Q9a = admissions privacy policy? (Y or N) Q9b = policy on front page for section? (Y or N) Q9c = same as HP policy? (y or n)	No <input type="checkbox"/> Yes <input type="checkbox"/>
9. Third Party or Different Policy? If 3 <sup>rd</sup> party, include name of firm	No <input type="checkbox"/> Yes <input type="checkbox"/>
10. <b>Alumni:</b> Privacy policy link on front page of segment? Q11a = admissions privacy policy? (Y or N) Q11b = policy on front page for section? (Y or N) Q11c = same as HP policy? (y or n)	No <input type="checkbox"/> Yes <input type="checkbox"/>
11. Third Party or Different Policy? If 3 <sup>rd</sup> party, include name of firm	No <input type="checkbox"/> Yes <input type="checkbox"/>
12. <b>Employment:</b> Privacy policy link on front page of segment? Q13a = admissions privacy policy? (Y or N) Q13b = policy on front page for section? (Y or N) Q13c = same as HP policy? (y or n)	No <input type="checkbox"/> Yes <input type="checkbox"/>
13. Third Party or Different Policy? If 3 <sup>rd</sup> party, include name of firm	No <input type="checkbox"/> Yes <input type="checkbox"/>

**[Following questions apply to Privacy Policy on Home Page]**

14. Scope: Does the policy contain a statement describing its explicit scope and coverage within the domain?	No <input type="checkbox"/> Yes <input type="checkbox"/>
15. Notice: Does the policy contain a statement describing whether or not personal information is collected by the domain?	No <input type="checkbox"/> Yes <input type="checkbox"/>
16. Notice: Does the policy say the domain collects personal information? (If NO, skip to Q.28-Security)	No <input type="checkbox"/> Yes <input type="checkbox"/>
17. Notice: Does the policy contain a statement describing what types of personal information is collected by the domain?	No <input type="checkbox"/> Yes <input type="checkbox"/>
18. Notice: Does the policy contain a statement describing how the domain uses collected personal information for internal purposes?	No <input type="checkbox"/> Yes <input type="checkbox"/>
19. Notice: Does the policy describe how the site uses cookies or web bugs (clear gifs)?	No <input type="checkbox"/> Yes <input type="checkbox"/>
20. Onward transfer: Does the policy contain a statement describing whether or not the domain shares collected personal information when required by law?	No <input type="checkbox"/> Yes <input type="checkbox"/>
21. Onward transfer: Does the policy contain a statement describing whether or not the domain shares collected personal information with third party affiliates? (If NO, skip to Q.25 – Choice)	No <input type="checkbox"/> Yes <input type="checkbox"/>
22. Onward transfer: Does the domain say it shares collected personal information with third party affiliates? (If NO, skip to Q. 25 - Choice)	No <input type="checkbox"/> Yes <input type="checkbox"/>
23. Onward transfer: If the domain shares collected personal information with third party affiliates, does the policy contain a statement describing how those affiliates comply with the posted privacy policy?	No <input type="checkbox"/> Yes <input type="checkbox"/>
24. Choice: Does the policy say that it uses collected personal information for correspondence and marketing activities conducted by the domain? (If NO, skip to Q. 27-Access)	No <input type="checkbox"/> Yes <input type="checkbox"/>
25. Choice: Does the policy contain a statement that gives site users a way to opt into/out of correspondence and marketing activities conducted by the domain?	No <input type="checkbox"/> Yes <input type="checkbox"/>
26. Access: Does the policy contain a statement that describes site user access to personal information collected by the domain?	No <input type="checkbox"/> Yes <input type="checkbox"/>
27. Security/Integrity: Does the policy contain a statement that describes how customer information is protected from unauthorized access during storage?	No <input type="checkbox"/> Yes <input type="checkbox"/>
28. Security/Integrity: Does the policy contain a statement that describes how customer information is protected from unauthorized access during transmission?	No <input type="checkbox"/> Yes <input type="checkbox"/>
29. Enforcement: Does the policy contain contact information for privacy concerns and information for the domain?	No <input type="checkbox"/> Yes <input type="checkbox"/>
30. Enforcement: Does the policy contain a statement about changes to the domain's privacy policy are handled?	No <input type="checkbox"/> Yes <input type="checkbox"/>
31. Enforcement: Does the policy include a privacy seal?	No <input type="checkbox"/> Yes <input type="checkbox"/>

**Readability/Understandability:**

33A. Flesch Kincaid Score	
33B. Flesch Kincaid Grade Level Score	
34. Number of Words	
35. Does the policy contain any internal links to facilitate navigation?	No <input type="checkbox"/> Yes <input type="checkbox"/>

**Date Coded:** \_\_\_\_\_ **Date Checked:** \_\_\_\_\_

**Comments:**



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