

University of Mississippi

eGrove

---

Library Publications

Library

---

10-6-2016

## Undergraduate Library Collection Use and Diversity: Testing for Racial and Gender Differences

Gail Herrera

*University of Mississippi*, gherrera@olemiss.edu

Follow this and additional works at: <https://egrove.olemiss.edu/libpubs>



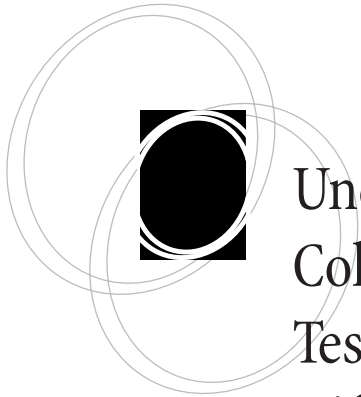
Part of the [Library and Information Science Commons](#)

---

### Recommended Citation

Herrera, G. (2016). Undergraduate Library Collection Use and Diversity: Testing for Racial and Gender Differences. *portal: Libraries and the Academy* 16(4), 763-774. doi:10.1353/pla.2016.0051.

This Article is brought to you for free and open access by the Library at eGrove. It has been accepted for inclusion in Library Publications by an authorized administrator of eGrove. For more information, please contact [egrove@olemiss.edu](mailto:egrove@olemiss.edu).



# Undergraduate Library Collection Use and Diversity: Testing for Racial and Gender Differences

---

Gail Herrera

**abstract:** This study examined gender and racial differences among undergraduate library collection users at the University of Mississippi. Checkout and electronic resource use data were compiled for the calendar year 2014. These data were used along with statistical testing to distinguish between groups and determine how well the library collection was serving historically underserved and nonminority populations. The results indicate that minority groups are served as well as, if not better than, the control groups.

## Introduction

The University of Mississippi (UM) in Oxford is committed to promoting diversity among its students and employees. The university's comprehensive Diversity Plan states, "The health and well being of the University of Mississippi—indeed the well-being of America—is dependent upon our embracing diversity."<sup>1</sup> Celebrating its 50th year of racial integration in 2012, the university planned a series of events and established a prominent civil rights monument commemorating the efforts of James Meredith and others dedicated to opening the doors of education to all citizens. The consistent message in the University of Mississippi's Diversity Plan is the importance of fostering a welcoming and inclusive environment to promote diversity. UM began admitting women in 1882 and established diversity goals related to gender in the current Diversity Plan. David Sansing, author of a UM sesquicentennial history, detailed unfortunate racial incidents as well as inclusive efforts during the transition toward embracing differences. He wrote, "No collegiate institution in America has been more

*portal: Libraries and the Academy*, Vol. 16, No. 4 (2016), pp. 763–774.

Copyright © 2016 by Johns Hopkins University Press, Baltimore, MD 21218.

open and honest about its racial problems or as earnest in its efforts to resolve them as the University of Mississippi."<sup>2</sup> Sansing reported that the university welcomed and supported foreign students since the 1960s.

Initiatives to embrace and support black students began as early as 1969 with the foundation of a student organization called the Black Student Union, but efforts during that time remained rife with discord despite the university leadership's efforts to embrace diversity.<sup>3</sup> Targeted recruitment efforts under Chancellor R. Gerald Turner demonstrated the university's commitment to multiculturalism, with the number of black students doubling under his leadership.<sup>4</sup> These efforts continue today, as evidenced by the current university Diversity Plan, which established goals to gauge progress in such areas as race, ethnicity, gender, disability, sexual orientation, religious choice, economic status, age, and geographic affiliation.

The University of Mississippi Libraries have a primary mission to support research and learning. They also have a responsibility to align their services with the strategic plans of the institution. As such, it is critical that the libraries' collections meet the needs of all users. Diversity can be defined in a number of ways, and all of these areas are important to both the university and the libraries. Currently, only race and gender data, two highlighted areas of importance in the Diversity Plan, are available for comparison with collection use.

Diversity terminology has changed over the years and continues to evolve, with different terminology preferred in certain regions of the country. The author would like to cautiously note that the intent of this study is to further the cause of diversity. None of the terms used are intended to be offensive; they merely reflect terminology used in the cited literature or employed currently. This study used the United States Census labels as standards but found them insufficient in some ways. Although the terms *race* and *ethnicity* have somewhat different meanings, they are used interchangeably in this article, following the methods of previous studies.

### Literature Review

Other institutions have faced the same diversity challenges as UM. Literature regarding multiculturalism and diversity in higher education began accumulating in the 1990s. In a 1991 article, Robert Trujillo and David Weber described efforts at Stanford University and its "formidable challenge" in building a diverse university community. They enumerated academic library failures, including a lack of diversity among library staff and ineffective information services for minority communities, and attributed these failures to a larger crisis in higher education in the United States.<sup>5</sup>

Much of the literature in the 1990s focused primarily on the need to diversify the librarian workforce.<sup>6</sup> Theo Jones-Quartey emphasized the importance of library programs and services in contributing to the success and retention of what she referred to as "students of color."<sup>7</sup> Lois Buttlar found in her 1994 study that library deans would most likely tout acquiring multiculturalism materials when asked about their efforts to support diversity.<sup>8</sup> Similarly, G. Edward Evans stressed the importance of creating collection development policies to serve culturally diverse user groups.<sup>9</sup> However, Trujillo and Weber went one step further, noting the importance of diversity in collection

development moving beyond the funding of special ethnic study areas.<sup>10</sup> In 1999, the focus on such discussions and priorities led to the American Library Association adopting diversity as a core value.<sup>11</sup>

By 2012, the Association of College and Research Libraries (ACRL) Board of Directors approved a set of diversity standards developed by ACRL's Racial and Ethnic Diversity Committee. In its standards, the committee stated that libraries must develop collections "inclusive of the needs of all persons in the community the library serves."<sup>12</sup> In a related essay, Myrna Morales, Em Claire Knowles, and Chris Bourg argued for examining a number of areas related to diversity, including library collections and access.<sup>13</sup> The shift from libraries simply purchasing multicultural content to assessing the needs of varied users was a significant one.

---

**The shift from libraries simply purchasing multicultural content to assessing the needs of varied users was a significant one.**

---

Several key studies have analyzed student library use. An early questionnaire by Brent Mallinckrodt and William E. Sedlacek found that academic library use makes a difference in retaining "students of color."<sup>14</sup> Based on the 1992–1993 College Student Experiences Questionnaire (CSEQ), Ethelene Whitmire found evidence that African American students use library resources more than white students do.<sup>15</sup> This finding further validated an earlier CSEQ analysis by John Ory and Larry Braskamp, in which they found that minority students used the library more than white students.<sup>16</sup> Whitmire conducted another study based on 1996 CSEQ data and again concluded that "students of color are using the academic library at higher rates than white undergraduates."<sup>17</sup> These early studies show that the library plays an important role in supporting diversity.

A number of studies focus on library use by Hispanic or Latino students. For example, Steve Jones, Camille Johnson-Yale, Sarah Millermaier, and Francisco Seoane Pérez found in 2009 that Hispanic students were more likely to use the library for short periods than students of other ethnic backgrounds.<sup>18</sup> Kuh and Gonyea also determined that Hispanic, Latino, and black students use library resources more frequently.<sup>19</sup> In a study with a slightly different focus, Katherine Dabbour and James Ballard concluded from their survey findings that white and Latino students spent equal amounts of time searching the Internet and library resources.<sup>20</sup> David Green also determined that Hispanic students have similar needs to those of the student body at large.<sup>21</sup>

All of the studies up to this point used survey instruments and relied on self-reporting. In a more recent study in 2013, Graham Stone and Ellen Collins used student and library data to analyze library use at the University of Huddersfield in the United Kingdom. Their analysis of ethnicity and use revealed few statistically significant differences between the groups tested. Chinese students borrowed fewer items and used fewer electronic resources than white students did. Students in the authors' "other" category also borrowed significantly fewer items than white students did.<sup>22</sup>

Studies related to gender differences and library use have produced mixed findings. Beverly Fortson, Joseph Scotti, Yi-Chuen Chen, Judith Malone, and Kevin Del Ben found that, regarding educational or academic success, men and women did not differ in their use of the Internet.<sup>23</sup> This finding countered two previous studies, one by Eric Weiser

and the other by the team of Patricia Odell, Kathleen Korgen, Phyllis Schumacher, and Michael Delucchi, both of which indicated that women used the Internet for educational assistance more than men did.<sup>24</sup> The 2009 study by Jones and his coauthors found greater library use by female students,<sup>25</sup> while Whitmire's data suggested that men were more likely than women to use academic libraries.<sup>26</sup> Brian Cox and Margie Jantti reported gender differences in the use of library electronic resources, with women using electronic resources more than men did.<sup>27</sup> More recently, Stone and Collins concluded that women showed higher use of library resources than men, while Krista Soria, Shane Nackerud, and Kate Peterson found that women were more likely than men to use libraries in only a few areas.<sup>28</sup> These mixed findings point to a need for further investigation.

This study furthers current literature by comparing use data and student demographic characteristics at the University of Mississippi Libraries. Survey data used in other studies relied on the user's recall, which can often be unreliable. Having actual use data makes possible a clear, data-driven analysis to test the success of the library collection.

## Method

Data used in this study were derived from library and university systems. ACRL guidelines for assessing library services to undergraduates state that both users and nonusers should be included.<sup>29</sup> Therefore, all undergraduates were included in the data and analysis. Library use data included physical material checkouts and electronic resource use determined from proxy logs. UM requires user authentication for electronic resource access both on and off campus, with only a few exceptions made for dedicated library computers allowing walk-in access. Wireless access to electronic resources even within the library requires authentication of the users; thus, unverified or walk-in access is comparatively small.

For this study, library collection use was based on the calendar year to conform to the standards of COUNTER (Counting Online Usage of Networked Electronic Resources), a collaboration between libraries and publishers to record and report online usage statistics in a consistent manner. User data were retrieved from the library catalog patron database for undergraduate students registered for both the spring and fall semesters of 2014, resulting in 12,152 undergraduates. The patron record number was matched to library circulation data with proxy logs for information about use of electronic resources. The University of Mississippi Office of Institutional Research, Effectiveness, and Planning assisted with matching the demographic data. Forty-five undergraduate records lacked a gender designation, and three had no racial designation. Data

regarding library instruction sessions, facility use, retention, and grade point average (GPA) were not readily available.

Library collection use was measured using two specific categories: (1) use of electronic resources and (2) checkouts of physical items. For physical item use, which includes such formats as print and media, use does not take into account students who consulted the materials within the

---

**Of the undergraduates in the 2014 data set, 51 percent used the library. Only 11 percent checked out physical materials, while 49 percent used electronic resources.**

---

library, because those data cannot be matched to a specific user. Together, the physical and electronic use metrics were combined into an overall collection use category. Of the undergraduates in the 2014 data set, 51 percent used the library. Only 11 percent checked out physical materials, while 49 percent used electronic resources. With such different use between physical and electronic resources, it was worth investigating if gender or race had any correlations to the type of resource used. Microsoft Excel and SPSS, a software package used for statistical analysis, were used to examine the results.

General demographics for the 2014 UM undergraduate student data set showed more female (6,591) than male (5,516) students. Looking at race, 23 percent had registered as a minority (2,793), while 77 percent had not (9,356). Detailing registered minority undergraduates into racial or ethnic categories helped to further describe the undergraduates represented in this data set. The breakdown was white (9,347), African American (1,826), Hispanic (369), Asian (319), two or more races (233), American Indian/Alaskan Native (29), and Native Hawaiian/Pacific Islander (17).

A statistical test called the Pearson chi-square test was used to compare the observed and expected data to determine if there was a statistically significant difference between the groups. The larger the chi-square value, the greater the probability that a statistically significant difference was present between the groups tested ( $\chi^2 = 0.05$ ). Analyses of the results were twofold. If the resulting comparison were not statistically significant, it would indicate that use of the library collection was similar between the groups tested. When the data were compared on a simple two-by-two contingency table by entering one variable in a row and the other in a column, the two variables were found to be contingent—that is, the value of one fluctuated with changes in the value of the other. The question then became whether the minority group was underserved compared to the control group. If the minority group used the library collection more than expected compared with the control group, the minority could be considered well served. However, if the minority group used the collection less than expected, it could be considered underserved.

For contingency tables larger than two by two, statistically significant results identified a need for further examination.<sup>30</sup> The chi-square test determined if there was a statistical significance between the values analyzed but did not further specify which of the values and combinations contributed to the statistical significance.<sup>31</sup> Due to the number of groups tested for racial correlations, the majority group of white students served as a control group, and all other groups were tested against it. Stone and Collins employed a similar method using white students as the control group for testing differences.<sup>32</sup> When testing frequency of use for checkouts or electronic resources, independent-sample *t*-testing was used to compare the group means to find statistically significant differences. A *t*-test indicates whether a difference between two groups' means reflects a "real" difference in the groups rather than a difference that occurred because of random chance in the sample selection.

Analysis of these data was the main focus of this study with an interest in answering the following questions:

Question 1. Is there a statistically significant difference between the number of male and female students who use the library collection?

Question 2. Are both the physical and electronic library collections serving more women more than men?

Question 3. Is there a statistically significant difference between the number of racial minority and nonminority students who use the library collection?

Question 4. Are both the physical and electronic library collections serving racial minorities more than the control group?



## Findings

### What Percentages of Male and Female Students Use the Library?

Question 1 asked, "Is there a statistically significant difference between the percentage of male and female students who use the library?" The results showed that a higher

---

**... a higher percentage of female students (58 percent) than of men (44 percent) used the library. In fact, women made up 61 percent of all library users.**

---

percentage of female students (58 percent) than of men (44 percent) used the library. In fact, women made up 61 percent of all library users. A statistical difference was found between gender and use of the library collection ( $p = 0.000$ ). In this analysis, there were significantly more female than male students using the library given the distribution of users (see Table 1). The contingency table distribution demonstrated

that 3,393 women were expected to use the collection, whereas 3,831 actually did so. By comparison, more men were nonusers of the library collection (3,114) than expected (2,676).

### Comparing Men and Women, Who Uses the Physical and Electronic Collections?

Question 2 asked if both the physical and electronic library collections served women more than men. Chi-square testing determined there was no significant difference between men and women ( $p = 0.500$ ) in their use of physical materials. Both men and women used the library's physical collection similarly. An independent-sample *t*-test also found no significant difference when comparing the mean checkouts for women and men (see Table 2). In general, physical item checkout was low across the board.

Chi-square testing for use of electronic resources echoed the findings in the first question, with women using electronic resources more than would be expected by chance alone ( $p = 0.000$ ). More women used electronic resources than expected, just as they used

---

**the library collection overall more than expected. Of those using the library collection, 95 percent used electronic resources. With electronic materials used predominantly, it is no surprise that these findings were similar.**

---

the library collection overall more than expected. Of those using the library collection, 95 percent used electronic resources. With electronic materials used predominantly, it is no surprise that these findings were similar.

In testing mean use of electronic resources by gender, there was a statistically significant difference between the number of

times men and women ( $p = 0.000$ ) used electronic resources, with women using electronic resources more often. In 2014, the mean number of uses for women was 555, while men used electronic resources less (see Table 2).

This manuscript has been reviewed, edited, and accepted for publication, portal 16.4.



Table 1.

Cross tabulation of gender and library collection use

		Collection use		Total	
		Yes	No		
Gender	Female	Actual count	3,831	2,760	6,591
		Expected count	3,393	3,198	6,591
		Percentage within gender	58%	42%	100%
		Percentage within collection use	61%	47%	54%
	Male	Actual count	2,402	3,114	5,516
		Expected count	2,840	2,676	5,516
		Percentage within gender	44%	56%	100%
		Percentage within collection use	39%	53%	46%
Total	Actual count	6,233	5,874	12,107	
	Expected count	6,233	5,874	12,107	
	Percentage within gender	51%	49%	100%	
	Percentage within collection use	100%	100%	100%	

Table 2.

Independent-sample *t*-test results by gender

	Women's mean	Men's mean
Electronic resources	555.25	442.07
Checkouts of physical items	0.45	0.49

\* Indicates a statistical significance between groups.

### What Numbers of Minority and Nonminority Students Use the Library?

Question 3 asked if there was a statistically significant difference between the number of racial minority and nonminority students who use the library collection. The chi-square test detected a statistically significant ( $p = 0.000$ ) correlation between racial groups tested in relation to use and nonuse of the library collection. Comparing the observed versus expected results of the contingency table, there were more African American, Asian, and Hispanic library users than would be expected by chance alone. This first test indicated a difference between some of the groups tested but did not identify which groups.

Further chi-square testing of each racial group against the control group resulted in only one statistically significant finding (see Table 3). African American student use of the



Table 3.

Collection use in comparison to the control group\*

	Significance
African American	0.000
Asian	0.377
Hispanic	0.229
Two or more races	0.134
American Indian	0.178
Pacific Islander	0.083

\*The control group consisted of white students.

library collection was higher than would be expected by chance alone when compared to the control group of white students ( $p = 0.000$ ). Among African American undergraduate students, there were 1,028 library users, which was more than the 939 users expected. The remaining racial group comparisons to the control group showed no difference in use, meaning that their use of the library collection was similar.

#### Do the Physical and Electronic Library Collections Serve Minorities More than the Control Group?

Question 4 asked if the physical and electronic library collections served racial minorities more than they served the control group. A statistically significant correlation was found when comparing users of physical material or checkouts with race ( $p = 0.000$ ). Further chi-square testing of racial minority groups against the control group resulted in several significant findings. There were more African American ( $p = 0.005$ ), Asian ( $p = 0.000$ ), and Hispanic ( $p = 0.039$ ) students using the print collection than would be expected by chance alone. For the remaining groups, there were no statistically significant differences.

Chi-square testing detected a difference between minority and nonminority groups when comparing electronic resource use with race ( $p = 0.002$ ). Further testing was required to determine which groups contributed to the significant result. Follow-up chi-square testing against the control group resulted in only one statistically significant finding, that African American undergraduates ( $p = 0.000$ ) used electronic resources more than would be expected by chance alone. For both sets of chi-square tests related to physical and electronic resource use, no racial minority group used the collection less than expected compared to the control group.

The study also examined frequency of use. Independent-sample *t*-testing was employed to compare means for checkouts and electronic resource use between the racial minority groups with the control group. As indicated by the  $p$  values in Table 4, there were no significant differences between the means of the minority group tested and the control group for either checkouts or electronic resource use. Both the racial minority groups and the control group of white students used library materials at a similar rate.

## Table 4.

Frequency of library collection use compared with the control group\*

	Checkouts of physical materials	Use of electronic resources
African American	0.887	0.089
Asian	0.486	0.723
Hispanic	0.772	0.986
Two or more races	0.411	0.330
American Indian	0.315	0.464
Pacific Islander	0.406	0.374

\*The control group consisted of white students.

### Conclusion

Looking at the overall undergraduate population, the library collection has served women and racial minority students as well as or more than the control group in 2014. Significantly more female than male students used the library collection, with women consulting electronic resources more often. Fewer male students used the library collection than expected; they also used electronic resources significantly less than female students.

Testing of racial minority use yielded several interesting results. Among the racial minority groups tested, more African American students used the overall collection compared to the control group. Chi-square testing revealed differences for use of physical and electronic resources as well. More African American, Asian, and Hispanic students used the print collection compared to the control group, while more African American students used electronic resources than the control group. African American students used both the physical and electronic resource collections significantly more than the control group. There were no statistically significant differences when examining frequency of use for physical and electronic materials.

Overall, only 21 percent of library collection users checked out physical materials, with 6 percent of those users being registered minorities. Even with such minimal use

**More African American, Asian, and Hispanic students used the print collection compared to the control group, while more African American students used electronic resources than the control group. African American students used both the physical and electronic resource collections significantly more than the control group.**

of physical items, this finding may be pertinent when the library considers acquiring or divesting physical materials. Further study in this area may help to determine if this finding is important. When considering the acquisition of materials, the ACRL Diversity Standards note the importance of “providing an equitable basis for purchasing materials.”<sup>32</sup> UM supports two demand-driven acquisition programs for print and e-books that further facilitate this goal. In 2009, we began acquiring materials such as books, e-books, and media requested through interlibrary loan. In 2011, we implemented a demand-driven e-book program in which the use of titles automatically triggered their purchase.

In 2012, Matthew Ciszek stated that, according to the literature, academic libraries do an adequate to good job of supporting ethnic minorities.<sup>34</sup> This study supports his finding, showing that minority undergraduate students used the library collection as much as, or more than, the control group. No minority groups used the collection significantly less than the control group. Kuh and Gonyea concluded their study with similar findings, noting that “the library appears to be a positive learning environment for all students, especially members of historically underrepresented groups.”<sup>35</sup> In considering a student’s sense of belonging as a major factor in student retention, Terrell Strayhorn includes the library among the associations and facilities that play a positive role.<sup>36</sup>

UM encourages student diversity by supporting a number of programs and strategies. The university’s ethnic and race-related programs include such projects as the MOST (Mississippi Outreach to Scholastic Talent) Conference, a mentoring program for African American students; the Luckyday Scholarship program; and the Black and White Affair, a semiformal dance. The university also sponsors student organizations that contribute to diversity on campus, such as the Black Student Union, the African Caribbean Association (which also includes faculty), the Latin American Student Organization, the University of Mississippi Feminist Majority, and the UM Chinese Club. Other successful programs are even more inclusive, helping with outreach to broader minority groups, such as the “two or more races” category. These programs include the Office of Multicultural Affairs and the International Student Organization. Of academic-related programs, Foundations for Academic Success Track (FASTrack), which recruits minority students and sets up supportive learning cohorts, provides another outreach platform. UM is also the home of the William Winter Institute for Racial Reconciliation, an institute supporting racial equity.

Like nearly all libraries, the University of Mississippi Libraries market services beyond the library collection. The libraries have mounted several exhibits related to diversity, including a 2014 one on world religions. The libraries openly offer workshops and a variety of instruction sessions, and other instruction sessions make up part of academic classes such as the Freshman Year Experience course. A number of outreach projects specifically target African American and women’s studies researchers. Research services are available to everyone, including the community. It is unclear how much these initiatives affect library use, which is an area for further study. While library employees make concerted efforts to reach users, many of the findings in this study are similar to those found elsewhere and therefore may not be due to the libraries’ unique efforts.

Broadening the scope of diversity to include the other areas mentioned in the University of Mississippi Diversity Plan, such as disability, sexual orientation, religious choice, economic status, age, and geographic affiliation, would be an area for further study. The

formulation of a library diversity plan similar to the one at the University of Montana in Missoula might be a next logical step to further diversity efforts at the University of Mississippi Libraries.<sup>37</sup> The libraries might also include diversity questions in library assessment surveys to obtain qualitative feedback from minority users. While this study provides a baseline, improving services for all users is quintessential to the mission of the libraries. Continuous review of library use along with retention and graduation metrics can help make the case that the libraries play an important role in supporting diversity.

*Gail Herrera is a professor and interim dean at the University of Mississippi in Oxford; she may be reached by e-mail at: gherrera@olemiss.edu.*

## Notes

1. University of Mississippi, *University of Mississippi Diversity Plan* (Oxford: University of Mississippi, 2013), 1–96, [http://www.olemiss.edu/provost/\\_files/UM\\_Diversity\\_Plan\\_2013.pdf](http://www.olemiss.edu/provost/_files/UM_Diversity_Plan_2013.pdf).
2. David G. Sansing, *The University of Mississippi: A Sesquicentennial History* (Jackson: University Press of Mississippi, 1999), 340.
3. *Ibid.*, 322.
4. *Ibid.*, 333.
5. Roberto G. Trujillo and David C. Weber, "Academic Library Responses to Cultural Diversity: A Position Paper for the 1990s," *Journal of Academic Librarianship* 17, 3 (1991): 157.
6. *Ibid.*; Cliff Glaviano and R. Errol Lam, "Academic Libraries and Affirmative Action: Approaching Cultural Diversity in the 1990s," *College and Research Libraries* 51, 6 (November 1990): 513–23; Association of Research Libraries (ARL), *Minority Recruitment and Retention in ARL Libraries* (Washington, DC: ARL, 1990); Jeanne M. K. Boydston, "Hiring Practices, Equal Employment Opportunity and Affirmative Action in ARL Libraries," *Journal of Library Administration* 14, 4 (1991): 17–35; Otis A. Chadley, "Addressing Cultural Diversity in Academic and Research Libraries," *College and Research Libraries* 53, 3 (May 1992): 206–14.
7. Theo S. Jones-Quartey, "The Academic Library's Role in the Effort to Improve Ethnic Minority Retention," *Educational Forum* 57, 3 (Spring 1993): 277–82.
8. Lois Buttlar, "Facilitating Cultural Diversity in College and University Libraries," *Journal of Academic Librarianship* 20, 1 (1994): 10.
9. G. Edward Evans, "Needs Analysis and Collection Development Policies for Culturally Diverse Populations," *Collection Building* 11, 4 (1992): 16–27.
10. Trujillo and Weber, "Academic Library Responses to Cultural Diversity."
11. American Library Association (ALA), "Libraries: An American Value," adopted February 3, 1999, <http://www.ala.org/advocacy/intfreedom/statementspols/librariesamerican>.
12. ACRL (Association of College and Research Libraries) Racial and Ethnic Diversity Committee, "Diversity Standards: Cultural Competency for Academic Librarians: Approved by the ACRL Board of Directors, April 2012," *College & Research Libraries News* 73, 9 (2012): 552.
13. Myrna Morales, Em Claire Knowles, and Chris Bourg, "Diversity, Social Justice and the Future of Libraries," *portal: Libraries and the Academy* 14, 3 (2014): 440.
14. Brent Mallinckrodt and William E. Sedlacek, "Student Retention and the Use of Campus Facilities by Race," *NASPA [National Association of Student Personnel Administrators] Journal* 24, 3 (1987): 148.
15. Ethelene Whitmire, "Racial Differences in the Academic Library Experiences of Undergraduates," *Journal of Academic Librarianship* 25, 1 (1999): 33–37.

16. John C. Ory and Larry A. Braskamp, "Involvement and Growth of Students in Three Academic Programs," *Research in Higher Education* 28, 2 (1988): 116–29.
17. Ethelene Whitmire, "Cultural Diversity and Undergraduates' Academic Library Use," *Journal of Academic Librarianship* 29, 3 (2003): 161.
18. Steve Jones, Camille Johnson-Yale, Sarah Millermaier, and Francisco Seoane Pérez, "U.S. College Students' Internet Use: Race, Gender and Digital Divides," *Journal of Computer-Mediated Communication* 14, 2 (2009): 244–64.
19. George D. Kuh and Robert M. Gonyea, "The Role of the Academic Library in Promoting Student Engagement in Learning," *College & Research Libraries* 64, 4 (2003): 368.
20. Katherine S. Dabbour and James David Ballard, "Information Literacy and US Latino College Students: A Cross-Cultural Analysis," *New Library World* 112, 7 (2011): 347.
21. David Green, "Supporting the Academic Success of Hispanic Students," in *College Libraries and Student Culture: What We Now Know*, ed. Lynda M. Duke and Andrew D. Asher (Chicago: ALA, 2012), 87–108.
22. Graham Stone and Ellen Collins, "Library Usage and Demographic Characteristics of Undergraduate Students in a UK University," *Performance Measurement and Metrics* 14, 1 (2013): 25–35.
23. Beverly L. Fortson, Joseph R. Scotti, Yi-Chuen Chen, Judith Malone, and Kevin S. Del Ben, "Internet Use, Abuse, and Dependence among Students at a Southeastern Regional University," *Journal of American College Health* 56, 2 (2007): 137–44.
24. Eric B. Weiser, "Gender Differences in Internet Use Patterns and Internet Application Preferences: A Two-Sample Comparison," *CyberPsychology & Behavior* 3, 2 (2000): 167–77; Patricia M. Odell, Kathleen O. Korgen, Phyllis Schumacher, and Michael Delucchi, "Internet Use among Female and Male College Students," *CyberPsychology & Behavior* 3, 5 (2000): 855–62.
25. Jones, Johnson-Yale, Millermaier, and Pérez, "U.S. College Students' Internet Use."
26. Ethelene Whitmire, "Academic Library Performance Measure and Undergraduates' Library Use and Educational Outcomes," *Library & Information Science Research* 24, 2 (2002): 107–28.
27. Brian L. Cox and Margie Jantti, "Capturing Business Intelligence Required for Targeted Marketing, Demonstrating Value, and Driving Process Improvement," *Library & Information Science Research* 34, 4 (2012): 308–16.
28. Stone and Collins, "Library Usage and Demographic Characteristics of Undergraduate Students in a UK University"; Krista M. Soria, Shane Nackerud, and Kate Peterson, "Socioeconomic Indicators Associated with First-Year College Students' Use of Academic Libraries," *Journal of Academic Librarianship* 41, 5 (2015): 641.
29. ACRL, "Guidelines for University Library Services to Undergraduate Students," revised October 2013, <http://www.ala.org/acrl/standards/ulsundergraduate>.
30. T. Mark Beasley and Randall E. Schumacker, "Multiple Regression Approach to Analyzing Contingency Tables: Post Hoc and Planned Comparison Procedures," *Journal of Experimental Education* 64, 1 (1995): 79–93.
31. Donald Sharpe, "Your Chi-Square Test Is Statistically Significant: Now What?" *Practical Assessment, Research & Evaluation* 20, 8 (2015): 1–10.
32. Stone and Collins, "Library Usage and Demographic Characteristics of Undergraduate Students in a UK University."
33. ACRL Racial and Ethnic Diversity Committee, "Diversity Standards," 555.
34. Matthew P. Ciszek, "Diversifying Diversity," *College & Research Libraries News* 73, 9 (2012): 547.
35. Kuh and Gonyea, "The Role of the Academic Library in Promoting Student Engagement in Learning," 373.
36. Terrell L. Strayhorn, *College Students' Sense of Belonging: A Key to Educational Success for All Students* (New York: Routledge, 2012).
37. Julie Biando Edwards, "Diversity Plans for Academic Libraries: An Example from the University of Montana," *Library Leadership & Management* 29, 2 (2015): 1–15.