

# Reference Is Not Dead: A Case Study of Patron Habits and Library Staffing Models

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**abstract:** For decades, declines in library reference use have been inextricably tied to technological improvements. This article asserts that reference staffing models may be a significant predictor of a decline in reference questions. Using two years of data, collected from a large public university, the researchers determined user preferences among five staffing models: (1) staffed and visible reference desks, (2) on-call and visible reference desks, (3) staffed, unseen reference desks, (4) on-call, unseen reference desks, and (5) chat reference, where librarians and users “talk” to each other in real time using special software. The researchers found that library users seem to prefer staffed and visible reference desks. When staffing does not match that model, users turn to chat reference rather than on-call or unseen reference services.

## Introduction

Do students even use library reference services anymore? This common refrain can be heard from almost any librarian with a slow reference shift (Friday at 4 p.m. comes to mind). But this question has deeper meaning: why would some librarians believe that reference services no longer interest university students? The broadest answer is that when librarians occupy a reference shift that receives no questions, they must wonder why they are there. In the following article, the researchers will analyze reference transaction data from three service points at a large, comprehensive public university’s library system between 2015 and 2017. The data will show that reference staffing choices play a vital role in how students interact with library reference desks. The researchers will draw their conclusions from the data as well as from literature in the field, which will be used to frame this discussion.

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## Literature Review

Beginning in the 1990s, libraries and reference services began to change in response to the growing popularity of personal computing and the Internet. In 1995, the *Journal of Academic Librarianship* featured a set of five articles that debated the future relevance of reference services to both the profession and academia. In this issue, Keith Ewing and Robert Hauptman asserted that “traditional academic reference service . . . needs to be eliminated” because computer literate students could independently navigate research resources.<sup>1</sup> Countering Ewing and Hauptman’s argument that reference services could be retired, Lori Goetsch held that “it is this popular notion of reference services as ‘reference librarians answering questions at a reference desk’ that puts reference services in danger.”<sup>2</sup> According to Goetsch, reference services are the processes that libraries use to answer patron questions, no matter the type of question or location of the questioner.<sup>3</sup> In this same issue, Cheryl LaGuardia predicted that, as reference services are devalued, librarian positions will become transmuted into positions with greater perceived value.<sup>4</sup> In 1995, David Lewis introduced the idea that shifts to electronic formats in the information landscape would require that remedial information literacy skills be taught to college students as part of their formal education, moving librarians “out from behind the reference desk and into the classroom.”<sup>5</sup> In concert with Lewis, Leslie Kong asserted that critical thinking skills (what could now be termed information literacy skills) would grow in importance.<sup>6</sup>

In 1998, Bernie Sloan noted that the late 1990s featured an “emphasis on technology and information resources and a very noticeable lack of discussion of the service aspects of the digital library.”<sup>7</sup> That same year, Marie Radford observed the reference transactions of 34 academic reference librarians and 155 library users and determined that 72 percent of those transactions occurred when librarians initiated the contact via verbal and nonverbal cues.<sup>8</sup> These two articles exhibit a shift in tone, from predictions of technology supplanting reference services to a realization that the value of reference services stems from the personal characteristics of the librarian. For example, John Fritch and Scott Mandernack in 2001 found that information “exists in a social context, as well as a structural context” where face-to-face reference interactions reflect and assist the user in mediating those contexts.<sup>9</sup> Juris Dilevko concluded that removing reference services or shifting them to tiered models, in which trained students or paraprofessionals handle the initial contact and refer more complex questions to a librarian, “devalues the majority of reference questions and information requests by assigning them to less qualified personnel.” The tiered model ignores the fact that “each reference question comes with a complex history, and, often, a psychosocial context.”<sup>10</sup> This reevaluation of the librarian’s role continued in 2002, when James Elmborg contended that reference work is teaching, as pedagogical techniques and models make librarians partners in the university’s educational enterprise.<sup>11</sup>

Due to the 2007–2009 recession, shrinking budgets forced libraries to do more with less, often replacing librarians with paraprofessionals or students. Many libraries used a version of the “Brandeis model,” a tiered model in which a student staffs the public-facing reference desk while a reference librarian remains available for assistance in a private office.<sup>12</sup> Dennis Miles found that nearly 83 percent of respondents in his 2013

survey had at least one nonprofessional staff member who provided reference services,<sup>13</sup> and nearly 60 percent of libraries relied upon students or paraprofessionals to handle questions at their reference desks.<sup>14</sup> Julie Banks and Carl Pracht surveyed 191 libraries, finding that 92 percent of respondents staffed their reference desks exclusively with paraprofessionals.<sup>15</sup> Some libraries trained student assistants to answer basic reference questions and to refer more advanced queries to librarians. In 2013, Christy Stevens wrote about the introduction of an on-call reference model at California State Polytechnic University, Pomona in which students were trained to answer basic reference questions and handed more complex inquiries over to a librarian. Librarians expressed concern that students failed to refer questions to them when appropriate. Upon review of the reference transaction logs, Stevens confirmed that students did not always redirect complex reference questions to librarians, as the policy required.<sup>16</sup> The librarians at Cal Poly Pomona were not alone in this concern. In a 2015 case study of an on-call reference model in which students staffed the reference desks at the Central Michigan University Libraries in Mount Pleasant, Timothy Peters cited concern among librarians that student assistants “may be overestimating their abilities and attempting to answer questions they should be passing on to a librarian.”<sup>17</sup> Replacing both librarians and paraprofessionals is used as a cost-saving measure but can affect reference quality. Students’ abilities to appropriately direct complex questions to an available librarian is a common concern among libraries considering a switch to an on-call reference model, and even among libraries where such a system has been put in place.

Post-recession, libraries have needed to develop ways to manage services due to the addition of virtual reference service points and increased instruction loads. As users have moved online, librarians have shifted to meet them. In 2011, Rebekah Kilzer noted that “the future of reference is a multi-modal approach.”<sup>18</sup> But she argued in favor of keeping the librarian in the library space, stating, “A physical service point links our presence in the building to the activities of studying and learning that take place in the building.”<sup>19</sup> Despite this connection, Dennis Miles found that 83 percent of the libraries that had taken librarians off the reference desk did so due to increased instruction workloads.<sup>20</sup> Raritan Valley Community College in North Branch, New Jersey, modified its reference hours and used on-call reference so that librarians could focus on teaching.<sup>21</sup> Other libraries removed librarians from reference entirely. The University of Arizona in Tucson used staff to provide reference services, shifting librarians’ work to concentrate on instruction and “in-depth” research support.<sup>22</sup> Indiana State University in Terre Haute replaced librarians with student assistants, the library administration believing that the reference desk was “not a good use of the librarian’s time”<sup>23</sup> and “promotion of information literacy was more important than reference in student success and retention.”<sup>24</sup> Dickinson College in Carlisle, Pennsylvania, eliminated the reference desk entirely, using an “office hours” approach to research support to enable librarians to handle a heavier teaching load.<sup>25</sup>

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Academic libraries have moved from emphasizing reference work to prioritizing instruction, implying that anyone can do reference but not everyone can teach. At the same time, information has become easier for students to find. Lyman Ross and Pongracz Sennyey claim that the “information literacy movement” exists to justify staffing levels,<sup>26</sup> but the vast amount of information available means that students need more support than ever in evaluating what they find. In Denise Agosto’s 2011 study of reference educators, participants argued that librarians have shifted from searchers to evaluators. As research becomes “self-directed,” the “librarian-as-evaluator” demonstrates the instructional value of the reference librarian.<sup>27</sup>

### Context

At the time the data for this study were collected, the Library System of Kennesaw State University in Kennesaw and Marietta, Georgia, was part of an R3 public university, a doctoral-granting institution with moderate research activity. The university had 32,878 undergraduate students and 2,968 postbaccalaureate and graduate students. Academic programs are split between two campuses, the Kennesaw Campus and the Marietta Campus, with each program having a “home” campus and library. The Marietta Campus offers programs in architecture and construction management, computer science, technical communications, and engineering that enroll approximately 8,770 students. The remaining 27,076 students are registered in programs based on the Kennesaw Campus, which includes majors in education, nursing, sciences, business, arts, humanities, social science, and human services.<sup>28</sup> Both campuses grant mostly bachelor’s degrees. The libraries on each campus ensure that their monograph collections reflect these programs but provide reference services for students regardless of major.

The Kennesaw and Marietta Campuses are approximately 9 miles apart, both in suburban areas. A shuttle bus system that connects the campuses allows students to travel between the two locations for classes and to use the different facilities on each campus, including the libraries. Both campuses have a mixture of on-campus and commuter students. The Kennesaw Campus was originally chartered as a commuter school, while the Marietta Campus has always offered residential facilities. Both campuses now provide student housing, but the university remains primarily a commuter school. The Kennesaw Campus has four residential communities, while the Marietta Campus has five. The university offers nearly two dozen Living-Learning Communities and Special Interest housing options for undergraduate students, but only about 15 percent of undergraduates live on campus.<sup>29</sup> There are approximately 5,200 residential beds between the two campuses; the Kennesaw Campus houses about 3,500 students and the Marietta Campus about 1,700.<sup>30</sup> Residential students are not tied to classes or majors on the campus where they live; they may take classes, especially general education classes, on both campuses.

The libraries occupy central locations on each campus. The Sturgis Library on the Kennesaw Campus sits between several large class buildings and across from the student center. On the Marietta Campus, the Johnson Library stands next to the largest classroom building. Architecturally, the libraries bear little resemblance to each other. The Sturgis Library is five stories tall and approximately 105,000 square feet. Each floor

is dedicated to a different use: the ground floor houses the library's classroom and Information Commons. The checkout desk and Information Help Desk stand just inside the entrance, about 10 feet from each other (see Figure 1). The Learning Commons and group study rooms with technology are on the first floor, while the second floor stores the Sturgis Library's circulating collection. The third floor is the library's quiet study area and also holds the reference collection and additional group study rooms. The fourth floor is used by nonlibrary teaching units, as well as science and math tutoring and the English as a second language center.

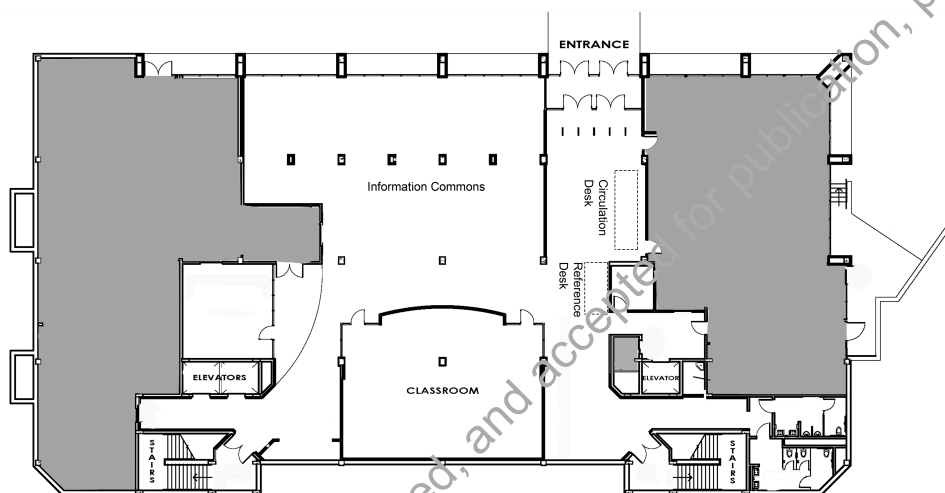


Figure 1. Map of the first floor of the Sturgis Library on the Kennesaw Campus of Kennesaw State University in Georgia.

The Johnson Library on the Marietta Campus occupies two floors and approximately 58,000 square feet. The first floor, which includes a sunken lower level, contains the Information Commons, Writing Center, and individual study spaces. The checkout desk stands adjacent to the entrance, while the reference desk occupies a small office approximately 300 feet away; the two desks are separated by the Information Commons and the building's elevator (see Figure 2). The second floor holds both the circulating and reference collections, and it also houses group study areas, technology rooms, and the library's quiet study space.

During the period studied, the Kennesaw State University Library System had 34 librarians working across both campuses. Reference desk services on both campuses were provided by 27 librarians. The Johnson Library was home to six librarians during the time of the study, while the remaining 28 librarians were based at Sturgis. Due to the relatively small number of librarians at the Johnson Library, several librarians in the Sturgis Research and Instructional Services Unit traveled to Johnson on a weekly or as-needed basis to provide additional reference support there. The small number of

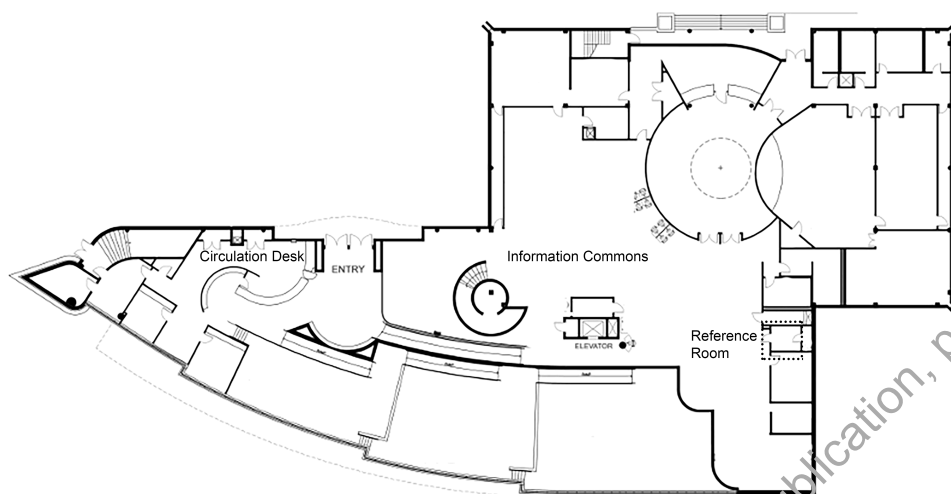


Figure 2. Map of the ground floor of the Johnson Library on the Marietta Campus of Kennesaw State University in Georgia.

librarians at the Johnson Library also led to the introduction of an entirely on-call reference model, with librarians available to answer questions but not stationed at a reference desk, beginning in fiscal year 2017.

During the period in which the data were collected, the two libraries had different hours, with Johnson generally closing about two hours earlier than Sturgis. Both libraries offered reference help Monday through Friday between 9:00 a.m. and 5:00 p.m.; neither campus had enough librarians to provide evening or weekend reference assistance. To remedy the lack of reference help during evenings and weekends, chat reference was contracted to a vendor (ChatStaff). ChatStaff provided 24/7 chat reference—24 hours a day, seven days a week—allowing librarians to focus on in-person and telephone reference users.

### Objective

The purpose of this article is to determine if (1) reference staffing models are a predictor of reference question rates, and (2) academic library patrons' reference behaviors are linked to reference staffing models and desk visibility.

### Hypothesis

Every librarian is familiar with the phrase “reference is dead.”<sup>31</sup> Reference is not dead, but libraries have slowly curtailed its use by moving away from a staffed and visible reference desk. When librarians no longer wait to answer questions at a reference desk where they can be seen, patrons stop asking questions in person.





## Methodology

This study evaluates two years of data gathered by librarians who used the Reference Analytics module of Springshare's LibAnswers to track their reference transactions.

The librarians in this study typically only recorded transactions that could be classified as reference questions according to the Reference & User Services Association (RUSA) definition of reference as "information consultations in which library staff recommend, interpret, evaluate, and/or use information resources to help others to meet particular information needs."<sup>32</sup> Librarians were trained to provide a standardized set of facts about each transaction. For

example, they identified the question type by choosing from one of 12 question types: Reference/Research, Directional, Technology, Library Catalog, Library Policy, Course Reserves, Reserves, GIL (GALILEO Interconnected Libraries) Account, GIL Express, ILL (interlibrary loan), Find Citation, and Other. Librarians at both the Information Help Desk at the Sturgis Library and the reference office at the Johnson Library, as well as librarians working for the chat reference service, answered directional and technology (including printing help) questions as well as true reference inquiries. Chat librarians recorded all transactions regardless of type. Librarians at the Kennesaw and Marietta Campuses recorded all transactions in FY2016 (fiscal year 2016) as a way of tracking changes in student behaviors following the renovation of the Sturgis Library, but they recorded only reference questions in FY2017. To ensure data consistency, all completed FY2016 transactions have been included in the data analysis, while FY2017 transactions related to the Directional, Technology, or Other question types have been removed because they were only consistently recorded by chat librarians. Also excluded from analysis were transactions through e-mail (whether sent directly to a librarian, sent to the general reference e-mail, or submitted via a form on the library website), SMS (short message service)/text, or Facebook.

This study analyzes data from July 2015 through June 2017, when the years were divided by the fiscal calendar, hereafter referred to as FY2016 and FY2017. Throughout the study's two-year period, five reference models were represented at three service points (the Sturgis Library, the Johnson Library, and chat):

- The Sturgis Library: in-person reference at a centrally located and staffed desk, offered in FY2016 and FY2017.
- The Sturgis Library on-call: occasional on-call reference at the library, provided in FY2016 and FY2017.
- The Johnson Library FY2016: in-person reference at a staffed desk out of sight in a research help room, offered in FY2016.
- The Johnson Library FY2017: exclusively on-call reference, available in FY2017. Staffed service points, such as checkout desks, relayed reference questions to librarians who were stationed in their offices.
- Chat: 24/7 chat reference offered throughout the study in FY2016 and FY2017.

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**When librarians no longer wait to answer questions at a reference desk where they can be seen, patrons stop asking questions in person.**

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Although the Johnson Library provided reference according to different models in FY2016 and FY2017, it represents the study's control because the service models remained unchanged within a single year. This continuity allowed the researchers to study the impact of alterations, such as moving to an on-call model, on the Sturgis Library's reference transaction rates within a single year, compared to those of the Johnson Library.

The Sturgis Library provides in-person reference service Monday through Friday between 9:00 a.m. and 5:00 p.m., which is considered a normal staffing model. Reference at Sturgis switches to an on-call model when classes are not in session, including Thanksgiving and spring break, as well as the period known as Maymester, when classes are offered at an accelerated pace during the month of May. The Sturgis reference desk also goes on-call during a few statewide conferences every year due to high conference attendance by campus librarians. This study focuses on the Georgia Libraries Conference, which takes place over three days during October and is the only time while classes are in session when reference at the Sturgis Library is on-call.

## Results

This article analyzes the reference data gathered during the library System's normal staffing models and compares those data with the reference transaction data gathered during periods of on-call staffing at the Sturgis Library (see Table 1).

The researchers found that the average daily reference rates for the five service points of chat, in-person reference service at Sturgis Library, Sturgis Library on-call, Johnson Library FY2016, and Johnson Library FY2017 differed considerably. In FY2016, chat had an average daily transaction rate of 16.1, with some days receiving no transactions and other days handling as many as 51. The standard deviation was 11.5 transactions; the more spread apart the daily numbers, the higher the deviation. That same year, the two campus reference desks had an average daily transaction rate of 20.5, with some

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days receiving zero transactions and other days fielding as many as 95, with a standard deviation of 20.7 transactions. These transactions took place primarily at the Sturgis Library. The data show that chat reference generally receives fewer questions per hour than campus reference desks: chat handles an average of 0.7 question per hour, and the reference desks deal with 2.6 questions per hour (split between two locations). Significantly, while chat

reference receives fewer questions per hour, it also has fewer days with zero transactions than do the campus reference desks. The differences in these numbers show that, while in-person reference has more transactions per hour, chat reference's value cannot be wholly discounted because the standard deviation is much lower for chat than for in-person reference; in other words, the daily transaction rates for chat varied less than those for in-person reference. Overall, chat received the highest number of reference transactions followed by in-person reference service at the Sturgis Library, the Johnson Library FY2017, the Johnson Library FY2016, and the Sturgis Library on-call (see Table 2). These data show that if hours of operation are not considered, patrons preferred chat





## Table 1.

Transactions by fiscal year, including directional and technology questions for all reference models in FY2016 and for only the chat model in FY2017

	FY2016	FY2017
Number of days the Kennesaw Campus provided reference services	220	215
Number of days the Kennesaw Campus used the on-call reference model	51	49
Number of days the Marietta Campus provided reference services	271	264
Number of days of chat reference on both campuses	359	358
Days without in-person reference transactions	35	29
Days without chat transactions	2	13
Average daily in-person transaction rate	20.5	6.8
Standard deviation of daily in-person transactions	20.7	4.7
Maximum daily in-person transaction rate	95	19
Average daily chat transaction rate	16.1	13.9
Standard deviation of daily chat transactions	10.5	9.2
Maximum daily chat transaction rate	51	46
In-person reference transactions	1,733	1,482
In-person non-reference transactions	2,773	Not tracked
Chat reference transactions	4,614	3,811
Chat non-reference transactions	1,175	1,166
Total reference transactions	6,352	5,269
Total transactions	10,295	6,568

FY2016 transactions include non-reference transactions for both the chat and in-person reference services, while FY2017 transactions include non-reference transactions only from chat. This change in recording practice accounts for the significant difference in transaction rates between the two years.

reference. If hours are considered, and chat reference transaction rates are divided by three (as in-person reference is offered for only one-third of the time that chat reference is available), then chat receives fewer reference transactions than did the Sturgis Library in FY2016 and FY2017. This indicates that while patrons value chat reference, they also appreciate some aspect of the Sturgis Library in-person reference model over those of the Sturgis Library on-call, the Johnson Library FY2016, and the Johnson Library FY2017.

Noting that the Johnson Library had low reference transaction rates in comparison to the Sturgis Library, the researchers sought to determine the causes of this difference.



Table 2.

## Total reference transactions by reference staffing model

Reference staffing model	FY2016	FY2017
Chat reference	4,614	3,811
Sturgis Library in-person reference	1,594	1,283
Sturgis Library on-call reference*	27	16
Johnson Library†	115	196

\*The Sturgis Library provided in-person service at a staffed and visible reference desk most of the time but switched to an on-call model when classes were not in session and during the Georgia Libraries Conference.

†The Johnson Library provided in-person reference at a staffed but unseen desk in a research help room in FY 2016 and switched to exclusively on-call reference in FY 2017.

First, they analyzed the overall campus population and found that, while the Kennesaw Campus is the larger, the Johnson Library's reference transaction rates failed to meet its proportionate level based on population, or 32 percent of the Sturgis Library's transaction rate. Given the Marietta Campus's population and the Sturgis Library's daily reference transaction average, the Johnson Library's daily reference rate should be closer to 2.1 questions per day (this approximation was found by multiplying the Sturgis Library reference rates by 32 percent and then by the number of days reference is offered). In reality, the Johnson Library received less than one question per day in both FY2016 and FY2017 (see Figure 3). The researchers then sought out instances where the Sturgis Library's reference model matched the Johnson Library reference model, that is, times when the Sturgis Library placed reference on-call, to determine if patrons at the two campuses behaved in a similar manner. The researchers found that when the Sturgis Library's reference service switched to an on-call model, the overall number of transactions dropped lower than the Johnson Library's reference transactions (see Figure 3). These fluctuations in reference transaction rates indicate that Sturgis Library and Johnson Library students behave in similar ways and that transaction rates may be driven by reference desk staffing or visibility.

The researchers found that, during on-call periods, both the Sturgis Library and the Johnson Library received fewer overall transactions, while chat transactions increased. Furthermore, the Sturgis Library's on-call transaction rate fell below that of the Johnson Library in FY2016 and FY2017. Then, in comparing the overall percentage of days during which all three locations received no reference transactions, the researchers found that the transaction rates of the Sturgis and Johnson Libraries converged during on-call staffing models (see Figure 4).

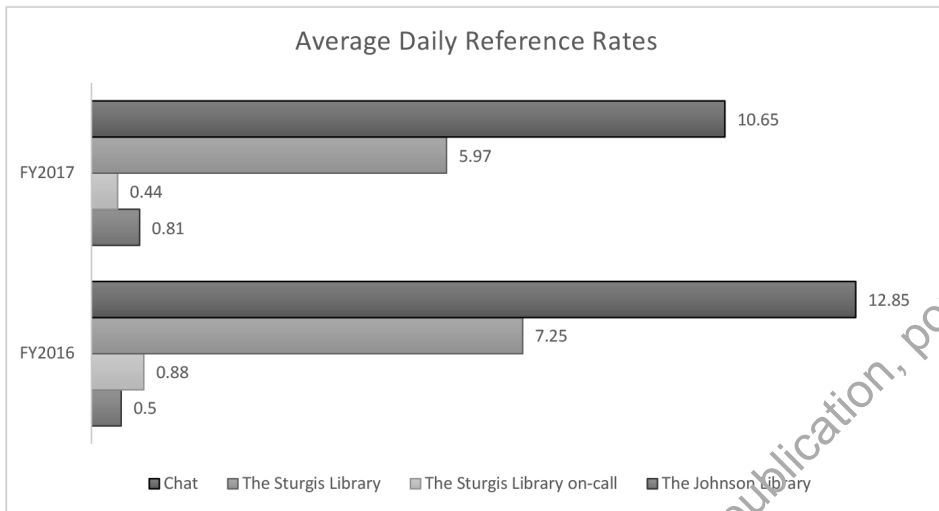


Figure 3. Average daily transaction rates for the chat reference service, a staffed and visible reference desk at the Sturgis Library, on-call service at the Sturgis Library, an unseen desk at the Johnson Library in FY2016, and on-call service at the Johnson Library in FY2017.

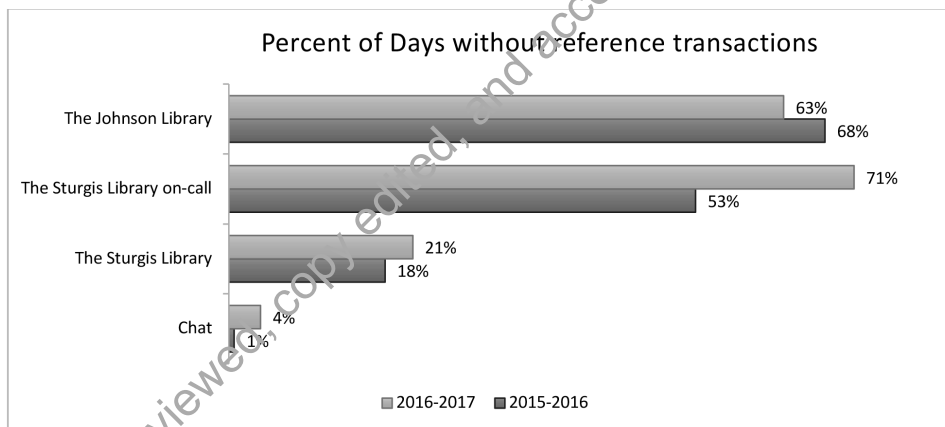


Figure 4. Percentage of days during which the Johnson Library, the Sturgis Library, and the chat reference service received no reference transactions.

The researchers analyzed reference transaction rates for the three locations (chat, the Sturgis Library, and the Johnson Library), comparing instances when the Sturgis Library used an on-call reference model during intersessions and holidays. Predictably, reference transactions decreased from the in-semester numbers during these periods (see Figure 5).

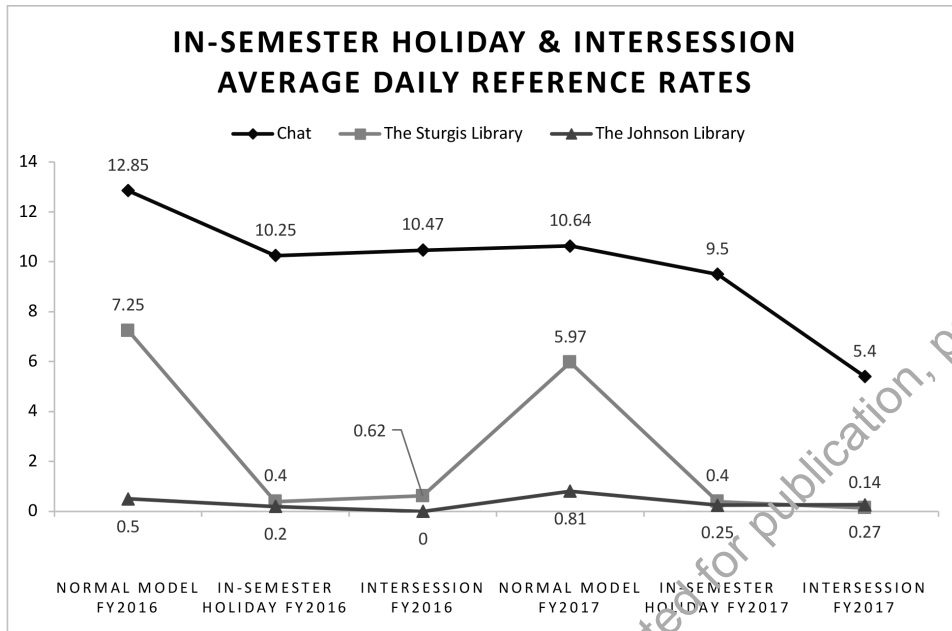


Figure 5. Comparison of the average number of reference transactions for chat reference, the Sturgis Library, and the Johnson Library during the normal library schedule, in-semester holidays, and intersessions.

Finally, the researchers analyzed the reference transaction rates for the three locations during times when the Sturgis Library used an on-call model during the semester to allow librarians to attend the Georgia Libraries Conference in October. According to previous trends (from holidays and intersessions), the researchers expected that overall transactions would decrease, including chat transactions. Instead, the researchers found that, while overall transactions for both physical locations dropped, chat transactions rose (see Figure 6).

During the state library conference, chat reference handled an 8.6 percent increase in questions during FY2016 and a 58 percent increase during FY2017. In comparison, the Sturgis Library on-call had decreases of 166 percent in FY2016 and 179 percent in FY2017, while the Johnson Library transactions climbed 29 percent in FY2016 and then dropped 84 percent in FY2017. This trend continued during the spring and summer, when Maymester used an on-call reference model and the summer semester returned to the libraries' traditional reference models. Once again, the on-call or staffing models received fewer than 2 questions per day, while the chat model handled more than 10 inquiries per day (Figure 7). Interestingly, the chat transaction rate was higher during Maymester than during the summer. This trend mirrored that during the on-call period in October. Once the Sturgis Library reverted to its normal staffed model, its transaction rate rose and the chat transaction rate fell. This trend indicates that chat use may be increased by on-call reference models.

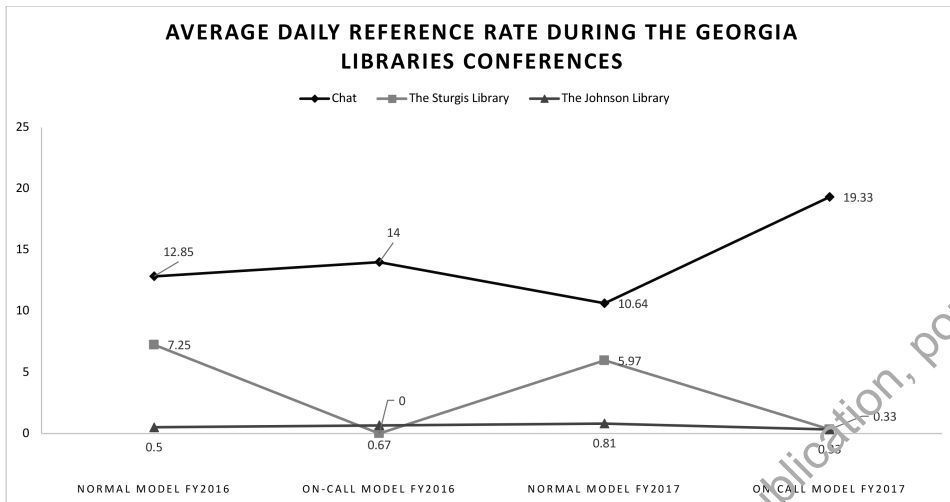


Figure 6. Average daily reference transaction rates for chat reference, the Sturgis Library, and the Johnson Library during the normal model and the on-call model (Georgia Libraries Conference).

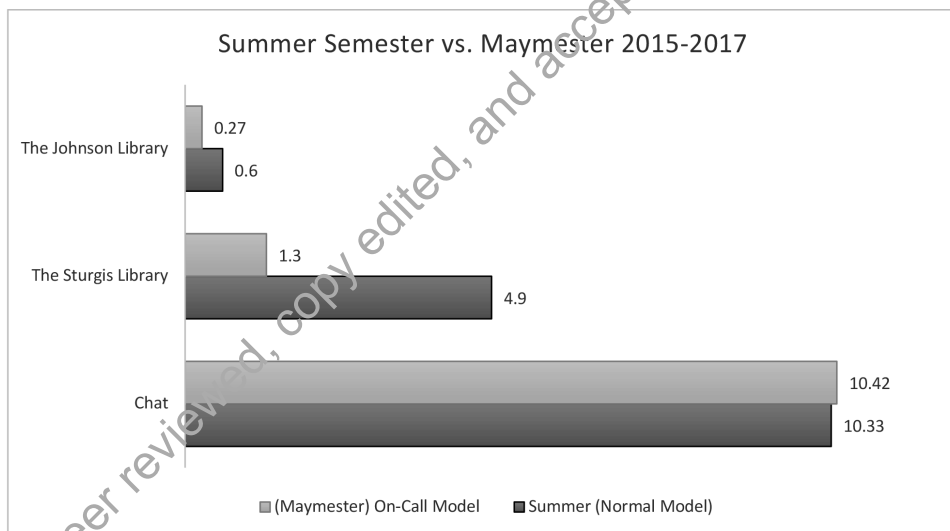


Figure 7. Comparison of average daily reference transaction rates for the Johnson Library, the Sturgis Library, and chat reference during the summer (normal model) and Maymester (on-call model) periods.

Tied together into a single analysis, the researchers found that, while chat reference transactions varied primarily due to fluctuations in the academic cycle, the Sturgis and Johnson Libraries' transactions changed due to both academic fluctuations and staffing models. Specifically, if the data trend from on-call periods at the Sturgis Library was transmuted to its staffed model, then the average daily reference rate would be 0.43 ques-



tion per day, as opposed to the staffed average of 13.7 questions per day (combining both FY2016 and FY2017 transactions). This indicates that reference staffing models impact the number of questions patrons ask as well as how they ask them (chat versus in-person).

## Discussion

The data from this study support this article's original objective by answering the questions: (1) Do reference staffing models impact reference question rates? and (2) Are

### ... the least popular reference model is a staffed, out-of-sight reference room.

academic library patrons' reference behaviors linked to reference staffing models? Regarding the impact of staffing choices, all data points indicate that staffing choices impact patron use of reference services. The data support the argument that patrons exhibit the following preferences: (1) overall, patrons prefer a staffed and visible reference desk; (2) next, patrons prefer 24/7 chat; (3) patrons exhibit a slight preference for on-call reference; and (4) the least popular reference model is a staffed, out-of-sight reference room. These preferences indicate that use of reference services depends upon staffing choices.

Regarding patron reference behaviors, the data support the conclusion that reference staffing models and patron behaviors are linked. For example, Figure 4 demonstrates that on-call or unseen reference models have a higher percentage of days with no reference transactions (between 40 and 70 percent) than other staffing models. These data match Jason Coleman, Melissa Mallon, and Leo Lo's 2016 findings, which identified increases to reference staffing as the primary factor in increased patron satisfaction with reference services.<sup>33</sup> The reduction of in-person reference transactions during on-call periods may occur because reference questions are not recorded or are not referred to librarians.<sup>34</sup> However, the authors hypothesize that the reduction is caused by students learning that physical reference locations are not staffed and so ceasing to ask questions

### When the reference desk is removed, combined with another service point, or put out of sight in a research room, complex reference transactions may decrease without outreach and proactive work by librarians.

in-person. This hypothesis was supported in 2019 by Stephanie Alexander and Diana Wakimoto, who observed that some students "may not get up and go to the checkout desk to ask a question" if the reference desk is unoccupied or if the checkout desk is far from them.<sup>35</sup> In instances where tiered reference models are successful, the reference desk is not removed but rather is staffed with students or paraprofessionals, with librarians available to answer complex reference questions. When the reference desk is removed, combined with another service point, or put out of sight in a research room, complex reference transactions may decrease without outreach and proactive work by librarians. Brian Bunnett, Andrea Boehme, Steve Hardin, Shelley

Arvin, Karen Evans, Paula Huey, and Carey LaBella found that when their separate reference desk was consolidated with another service point, complex reference transac-





tions decreased and research consultations did not increase as expected.<sup>36</sup> Theresa Arndt found a “dramatic increase” in research consultations after the removal of the reference desk as a result of improved training across library units and aggressive marketing of research appointments and librarian office hours.<sup>37</sup> Without libraries committing to such measures, students cannot be expected to find a librarian for reference assistance.

The data also support the hypothesis that overall reference rates decrease during on-call days, which is supported by other research where visibility of services is tied to use. For example, Jodi Jameson, Gerald Natal, and John Napp found in 2019 that the inability to identify librarians was the top barrier to students asking for help and the ability to recognize and access librarians were two of the most effective facilitators to students requesting assistance.<sup>38</sup> Another issue with on-call reference service may be patron responses to librarian referrals, where the patron is asked to wait for a librarian or go to the librarian’s office and then does not. In a study of telephone reference referrals, Tammy Nickelson Dearie and Alice Perez found that 176 (55 percent) of 320 calls to the reference desk were transferred from an information desk and then went unanswered.<sup>39</sup> Library policy was to give out the unlisted direct line to the reference desk after a caller had been unsuccessfully transferred three times, and the study counted a subsequent 79 direct calls to the reference desk.<sup>40</sup> As many as 55 percent of the callers whose transferred call to the reference desk went unanswered may have failed to call back. In chat contexts, patrons often do not respond favorably to librarian referrals or transfers. In a study by Paula Dempsey, only 29

percent of users responded positively to a transfer, 29 percent reacted neutrally, 5 percent negatively, and 38 percent of patrons did not respond at all, that is, they disconnected from the chat librarian upon hearing of a referral.<sup>41</sup> As a result of this research, the authors hypothesize that patrons

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**... patrons learn that chat reference services are consistently available, while physical reference services are not, and this realization drives them to use chat more frequently.**

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learn that chat reference services are consistently available, while physical reference services are not, and this realization drives them to use chat more frequently. Essentially, when a library no longer offers a staffed reference desk, patrons stop seeking in-person reference assistance. This hypothesis is supported by the data, which show that, while chat reference rates vary throughout the year, both the Sturgis Library and the Johnson Library receive less than one question per day during on-call periods. As Kilzer asserted, “Library staff must continue to be available and visible in a variety of ways” and having a visible, staffed reference desk ties the “activities of studying and learning” to the building.<sup>42</sup> Removing librarians from a visible help desk implies to students that there is no one in the building to help them.

Notably, the Georgia Libraries Conference (see Figure 6) is anomalous in that the on-call service model decreased overall reference questions in FY2016 while it increased them in FY2017. Normal staffing models in FY2016 had an average daily rate of 21 questions, which decreased to 14.67 questions during the on-call period. In FY2017, normal staffing models had an average daily rate of 17.36 questions, which increased to 19.99 questions during the on-call period. There is no clear explanation for why reference questions

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increased during FY2017's on-call period. This growth may stem from external factors, such as faculty-driven scheduling and curriculum variations between the two years.

Some variations in the data indicate a more nuanced issue, however. For example, the Johnson Library's overall reference rates increased during FY2017 following a shift from staffing a reference desk that stood out of sight to an on-call model, indicating that on-call models are more effective than unseen models. This trend was also identified by Alexander and Wakimoto, who found that building layout can make "it easy for students to find the librarians at the reference desk." In this case, the Johnson Library's layout makes it difficult to find the reference room.<sup>43</sup> Further research should be conducted on the relationship between habit and reference seeking behavior, as well as the relationship between library space design and reference seeking behavior. For example,

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**... both the literature and the data indicate that, in a physical setting, patrons react most favorably to a staffed and visible reference desk.**

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the Johnson Library has a split-level layout that makes it challenging for users to find the official reference desk. Above all, further research needs to be conducted on patron attitudes toward specific reference staffing models, and this study's data pool must be expanded to other institutions to eliminate institution-specific behaviors.

### Conclusion

The research shows that patrons react in different ways to different reference staffing models. They respond positively to staffed and visible reference desks as well as to 24/7 chat services. They react less favorably to plans that reduce staffing (such as on-call models). The relationship between reference staffing models and patron behavior is complex, but both the literature and the data indicate that, in a physical setting, patrons react most favorably to a staffed and visible reference desk.

When librarians are removed from the reference desk and replaced with an on-call model (or if the reference desk is eliminated completely), face-to-face reference transactions decrease overall. This happens for one of three possible reasons:

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**As long as patrons exist, they will have questions; this is particularly true in academic libraries, where many patrons have just begun to learn research methodologies.**

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1. Reference questions are not logged as reference transactions when there is not a staffed reference desk.
2. Patrons learn that chat reference services are consistently available, while physical reference is not.
3. Patrons stop seeking assistance from reference desk locations during on-call periods, and this becomes a habit.

While the content of a reference transaction may have changed since the 1990s (the authors do not argue that ready reference is alive and kicking),

the data clearly show that patrons continue to need reference help. As long as patrons exist, they will have questions; this is particularly true in academic libraries, where

many patrons have just begun to learn research methodologies. At the end of the day, when a library chooses to prioritize other tasks over reference services, it deprioritizes the patron. The patron's needs do not disappear when the librarian at the reference desk is replaced with an on-call list, but the patron might.

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