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## A Preliminary Inquiry into the Use and Management of 3D Virtual Anatomy Tables within Libraries

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**A Preliminary Inquiry into the Use and Management of 3D Virtual Anatomy Tables  
within Libraries**

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## **A Preliminary Inquiry into the Use and Management of 3D Virtual Anatomy Tables within Libraries**

### **Abstract**

This preliminary study explored the use and management practices of 3D virtual anatomy tables (VATs) currently owned by libraries to support their learning communities. This study also examined how libraries have adapted their VAT services during the COVID-19 pandemic. We sent an IRB-approved 15-question survey to members of 46 library-focused email listservs to assess the use and management practices of VATs among libraries. We analyzed the survey results within Qualtrics' default report feature to perform basic calculations and generate visualizations related to the survey data. We received 31 completed surveys, with 23% of those respondents reporting that they were from libraries that owned a virtual anatomy table at any point in time. Respondents from libraries with virtual anatomy tables shared insights into how their libraries offered VAT-related services for their users, how they offered VAT services before and during the COVID-19 pandemic, details regarding their VAT cleaning practices, and what notable challenges they faced while providing VAT services before and during the pandemic. This survey will provide libraries with initial data regarding how other libraries with virtual anatomy tables provide VAT services for their library users and help inform the authors' future research on this topic.

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**Keywords:** virtual anatomy table, virtual dissection, anatomy education, 3D virtual anatomy tools, libraries

## Introduction

While human anatomy education is crucial to most medical and health sciences programs, it often becomes a challenging subject area for students to master.

Traditional anatomy instruction methods, including human cadaveric dissection, are generally preferred in many programs. Emerging three-dimensional (3D) virtual technologies that simulate cadaver dissection and exploration can complement conventional anatomy instructional activities (Periya & Moro, 2019). 3D virtual anatomy tables (VATs) are becoming helpful digital anatomy learning tools, as some medical schools and health sciences programs seek to introduce new technology resources to students as supplements to structured anatomy laboratory and classroom learning experiences (Keenan & ben Awadh, 2019).

Many libraries of varying types are incorporating emerging technologies to support active learning initiatives within the academic departments, programs, and user groups that they serve. These libraries can serve as universal locations for virtual anatomy tables, facilitating usage and access to these tables among a wide variety of disciplines and learning communities (Blakely, 2019). In addition, academic departments can benefit from having access to VATs through their libraries, which frees them from investing departmental funds or seeking grant funding to purchase this technology (Carter, 2017).

This preliminary study seeks to identify some of the current practices surrounding the use and management of VATs among libraries before and during the

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COVID-19 pandemic. Additionally, this study will help inform our future research on how some libraries offer VAT services to support anatomy learning and user engagement within their constituencies.

### **Literature Review**

Human anatomy learning activities have evolved. Initially, these activities focused on traditional textbooks and atlases, along with hands-on work with human cadavers, prosections, and plastinated specimens. More recently, anatomy learning tools have expanded to include multimedia and visualization tools, including computer-based virtual anatomy software and 3D virtual anatomy tables (Periya & Moro, 2019). Three-dimensional virtual anatomy tables (also known as virtual dissection tables) are massive or life-sized computerized tables with touchscreen capabilities. These tables allow users to interact with anatomy models and perform virtual dissections and other anatomy exploration techniques (Allen et al., 2019).

Virtual anatomy tables represent the convergence of computerized anatomy simulation software and large digital displays with touchscreen capabilities (Chung et al., 2015). With the intersection of these technologies, VAT brands, including Anatomage (as seen in Figure 1) and Sectra, take computer-based learning to a new level by introducing users to life-size platforms that simulate an actual cadaver lab setting (Anatomage, 2018a; Sectra AB, 2020).



Figure 1. Anatomage Table. Reproduction of Image with Permission of Anatomage Inc.

<https://www.anatomage.com/>

The need for VATs arose from anatomy educators' desire to offer computer-based learning tools to enhance student learning outside the traditional cadaver lab setting (Custer & Michael, 2015). Cadaveric dissection generally serves as the foundation for most anatomy lab programs. However, some academic departments may limit student use of cadavers due to accessibility issues, financial constraints, or other restrictions (Davis et al., 2014; Periya & Moro, 2019). Some anatomy instructors find that incorporating VATs and other technology-based learning tools into their

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courses makes anatomy teaching more clinically relevant by providing students with opportunities to interact with medical imaging outputs such as magnetic resonance imaging (MRI) and computed tomography (CT) scans (Davis et al., 2014; Keenan & ben Awadh, 2019). Keenan and ben Awadh (2019) stated that "typically, we use the Sectra (Table) to deliver learning outcomes relevant to clinical image interpretation and to support and enhance broader understanding of cross-sectional and three-dimensional anatomy" (p. 44).

Many anatomy learners have also expressed interest and discovered benefits in using VATs to bolster their anatomy study activities. For example, a study involving pre-clinical medical students revealed that most students agreed or strongly agreed that using the Anatomage Table significantly improved their understanding of human anatomy. In addition, most of this study's respondents (78%) agreed or strongly agreed that the interactive nature of the Anatomage Table made anatomy learning more engaging than traditional learning methods (Brown et al., 2015). According to Kažoka & Pilmane (2017), most students enrolled in a human anatomy course found the Anatomage Table an exciting and valuable learning tool to develop anatomy knowledge and related skills.

Students and instructors may also encounter challenges in using VATs for instructional activities. For example, medical imaging science students cited one disadvantage as having limited time to use the Anatomage Table during instruction (with students stating one to three hours per week as optimal) (Custer & Michael,



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2015). Fyfe et al. (2013) also commented that anatomy students reported not having enough time to use the Anatomage Tables, as these tables only allow one person at a time to operate the touchscreen interface.

An increasing number of libraries are purchasing and developing services to support VATs along with other technology-based anatomy learning tools to offer users hands-on learning opportunities beyond the anatomy lab and classroom settings (Gross & Masters, 2017). Incorporating VAT services into these libraries provides their users with new opportunities to integrate anatomy learning into activities rooted in science, technology, engineering, arts, and math (STEAM) disciplines. For example, the University of Michigan Taubman Health Sciences Library has integrated its Anatomage Table into STEAM-related activities for visiting groups, including a National Science Foundation (NSF)-funded Neuroscience Camp and a Science Olympiad for middle school students (Rosenzweig et al., 2017). In a 2016 article that highlights the Virtual Learning Lab at the Texas A&M University-Commerce Libraries, Lutes (2016) stated,

[t]here is no doubt that 3D and VR technology is increasingly mainstream, and the quicker libraries accept that, the sooner patrons of all backgrounds and situations can have access to this incredible tech that will be impacting the way in which we live on a daily basis, in our schools and in our homes. (p. 7)

After performing literature searches in 2019 and 2021, we found no published studies that provided an aggregated overview of the utilization and management

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practices of 3D virtual anatomy tables across various library settings. Addressing this knowledge gap, we aimed to gather preliminary data on how libraries used and managed their VATs before and during the COVID-19 pandemic. In addition, for libraries that do not currently own VATs, our survey gathered basic information on whether those libraries are considering the purchase of a VAT at a future date.

### **Methods**

We created a 15-question survey to assess the use and management practices of 3D virtual anatomy tables among libraries (Appendix A). The University of Tennessee, Knoxville Institutional Review Board approved the study and deemed it eligible for exempt review (UTK IRB-21-06406-XM). No personal identifiers were collected from respondents during the administration of the study.

The first question asked respondents to indicate whether their library has ever owned a virtual anatomy table. Respondents from VAT-owning libraries were then presented with additional questions regarding their anatomy table brands and specifics on how their anatomy tables were managed and maintained within their library settings. Respondents who indicated that their libraries did not own VATs were then asked about their libraries' possible plans or interest in purchasing VATs within one to two years.

The survey was conducted through the University of Tennessee's Qualtrics account (Qualtrics, 2021) in July 2021 and was open for three weeks. We distributed the survey's invitation email through 46 email listservs that library employees frequently

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use. These email listservs varied in coverage and included listservs hosted by prominent national, international, regional, state, school, local, and medical library associations and groups (Appendix B). Four listservs encompassed international libraries, including the Canadian Medical Libraries Association, the European Association for Health Information and Libraries, and two listservs affiliated with the International Federation of Library Associations and Institutions (ELEARN and Health and Biosciences Libraries Section).

Once the survey closed, we analyzed the entire data within Qualtrics using its default report feature. This reporting feature allowed us to perform basic calculations and generate visualizations of the collected survey data. We also exported the survey dataset from Qualtrics to Microsoft Excel to sort, clean, and remove incomplete responses from the finalized dataset.

### **Results**

We received a total of 37 responses; however, six responses were incomplete, and we removed them from the final dataset prior to analysis. Of the 31 respondents who completed the survey, seven respondents (23%) indicated that their libraries had owned a VAT. Out of these seven respondents, one respondent indicated that their library had owned its VAT for one month, while the other six respondents indicated that their libraries had owned VATs for more than one year.

Conversely, 24 respondents (77%) reported that their libraries did not own VATs. Among these respondents, two respondents (8%) reported their libraries were

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considering the purchase of a VAT within one to two years. Other respondents indicated that their libraries were maybe considering the purchase of a VAT (21%, n=5) or that they were unsure (21%, n=5) about their libraries' plans towards purchasing a VAT in the specified timeframe. Fifty percent (n=12) of these respondents shared that their libraries were not considering purchasing a VAT in the near future. Figure 2 provides an overview of the responses from participants regarding their libraries' plans for future VAT purchases.

Is your library currently considering the purchase of a 3D virtual anatomy table within the the next one to two years?

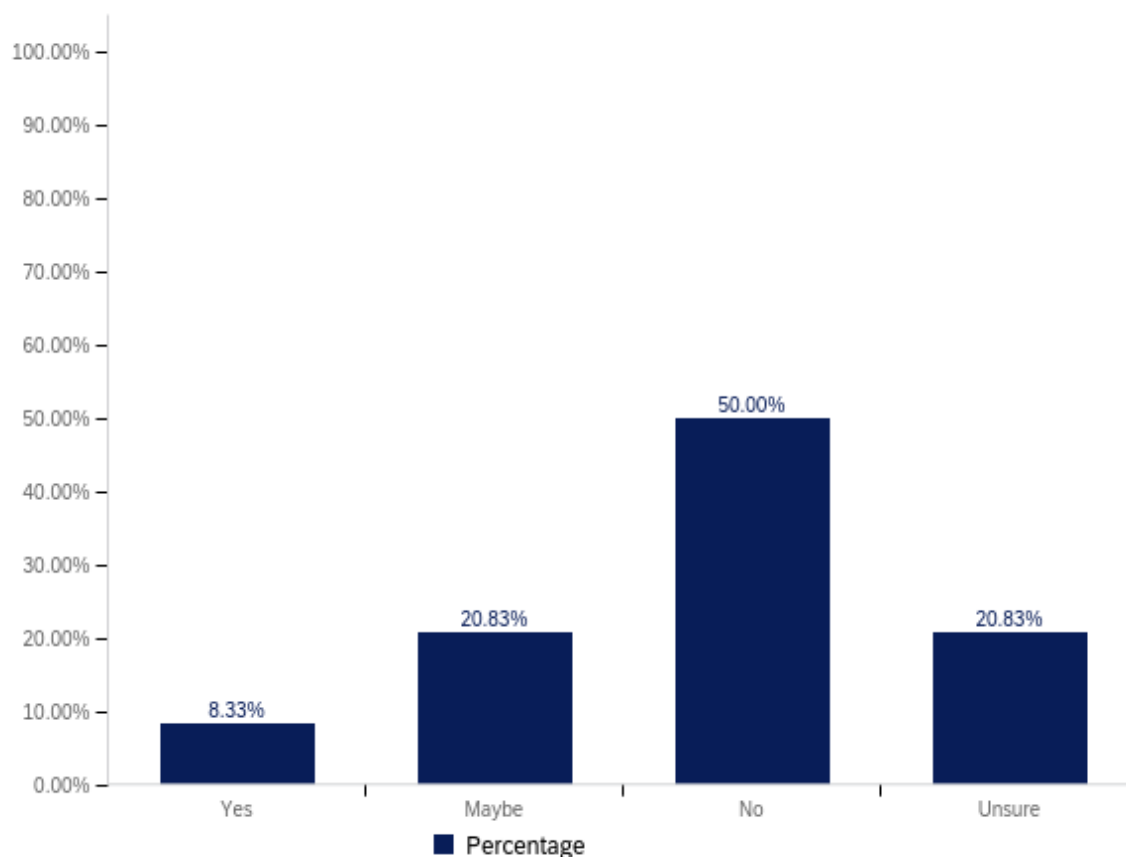


Figure 2. Overview of responses regarding future plans for virtual anatomy table purchases.

The survey compiled basic demographic information for respondents whose libraries owned VATs, including the types of libraries they worked for and what positions they held within their libraries. Five respondents worked for libraries affiliated with academic medical centers or medical schools. One respondent worked for a nursing/allied health/health sciences library, and another worked for a general college/university library.

The subsequent survey questions focused on gathering specific information from respondents whose libraries owned VATs. These questions asked participants about the types of anatomy table brands owned and how their VATs were managed in their libraries. Six respondents (86%) indicated that their libraries owned Anatomage Tables, while one respondent reported owning an Ideum Touch Table. No respondents reported owning a Sectra Table or any other VAT brands. The survey asked respondents who managed their VAT for their libraries in an open-response question. Responses included general library staff (2), library IT staff, clinical education librarian, visualization specialist, and unsure. One respondent indicated that prior to Fall 2019, the library managed their VAT, but currently, the simulation center manages the table.

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The survey also asked respondents a series of questions regarding how their libraries offered and managed VAT services for their users. For example, one question asked respondents how their libraries allowed users to access their VATs (respondents were allowed to select more than one answer). As seen in Figure 3, all of these participants (n=7) indicated that their tables were available for walk-in/on-demand use, and 43% (n=3) of respondents noted that their libraries also provided VAT access to their instructors for classroom instructional purposes. Eighty-six percent (n=6) of respondents stated that their libraries also offered individual or group appointments to their VAT users.

How do you allow users to have access to your anatomy table? (You may select more than one answer.)

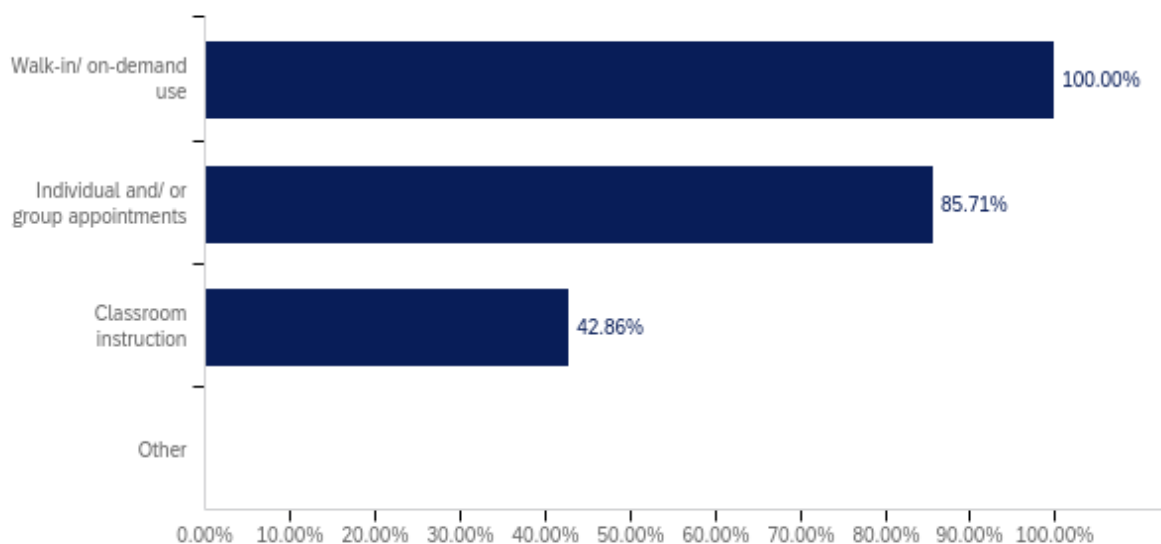


Figure 3. Summary of responses regarding library management of VAT user services.

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Figure 4 outlines responses surrounding how VAT-owning libraries manage their VAT appointments. Among this group of participants (who were allowed to select more than one option), 67% (n=4) stated that their libraries managed VAT reservations using online reservations tools, such as LibCal, Microsoft Scheduler, and Google Forms. Sixty-seven percent (n=4) of these respondents also indicated that their libraries managed VAT appointments through email requests, and 50% (n=3) stated that their libraries also accepted VAT appointments via phone calls. One participant shared that their library also accepted walk-up appointments at their reference desk, with these reservations being managed through Springshare LibCal© (a scheduling system that libraries commonly use to manage reservations) (Springshare, 2020).

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Since you allow users to make appointments to reserve your 3D virtual anatomy table, how do you manage those appointments? (You may select more than one answer.)

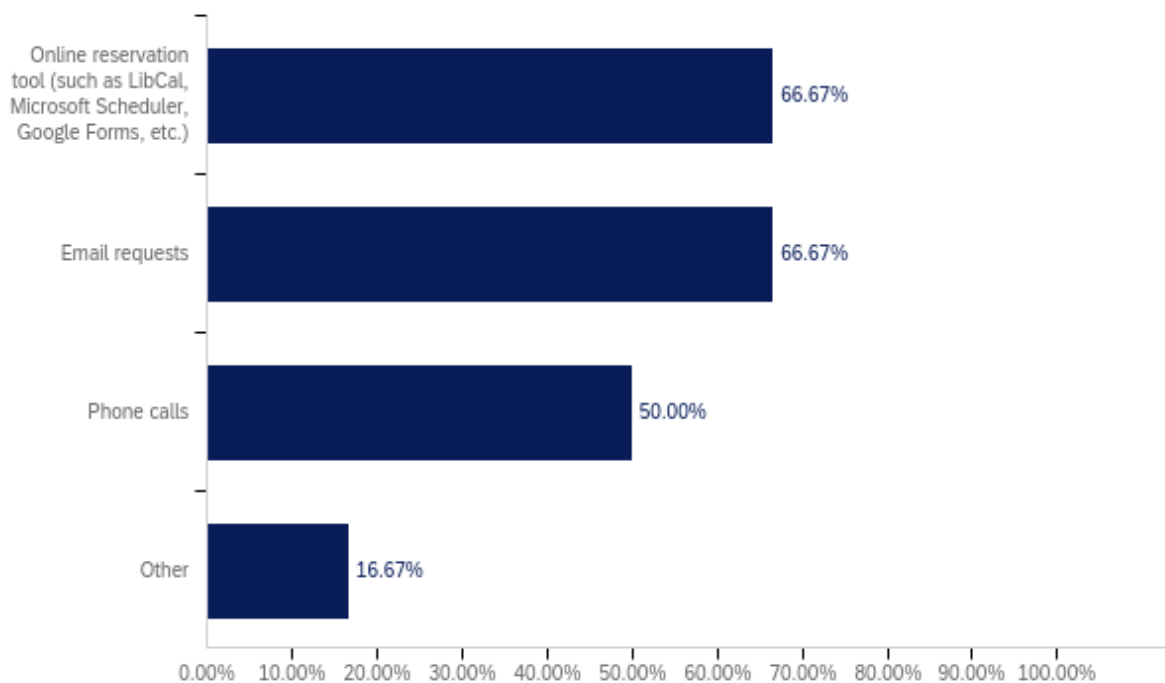


Figure 4. Overview of responses regarding VAT appointment management among participating libraries.

The next set of survey questions asked participants whether their libraries have changed VAT services during the COVID-19 pandemic, what notable challenges their libraries have faced offering VAT services during a pandemic, and how their libraries might offer VAT services after the pandemic subsides. As seen in Figure 5, one question asked participants to select ways their libraries have changed how they provide VAT services during the pandemic (respondents were allowed to select more



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than one answer). For this question, one respondent indicated that their libraries were accepting fewer VAT appointments, 43% (n=3) stated that their libraries reduced hours of operation for their VATs, while another 43% (n=3) cited a complete VAT closure or no VAT services being offered. One respondent said their library did not change any VAT services during the pandemic. Two participants selected "Other" and submitted open responses. One respondent stated that their VAT service is not yet operational. Another respondent commented that while their library did not provide physical access to their VAT during the pandemic, they switched to virtual access to the table (please note that some VAT vendors may offer libraries access to virtual versions of their VAT software for remote use). When asked about their libraries' plans to offer VAT services after the pandemic subsides, 57% (n=4) of respondents indicated that their libraries plan to resume pre-pandemic operations, and 29% (n=2) stated that their libraries were undecided about their plans for future VAT services. One respondent selected "Other," adding that their library will resume regular operation while hoping to keep virtual access, which was still to be determined.

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Has your library changed how 3D virtual anatomy table services are provided to its users during the COVID-19 pandemic? If so, how have those services changed? (You may select more than one answer.)

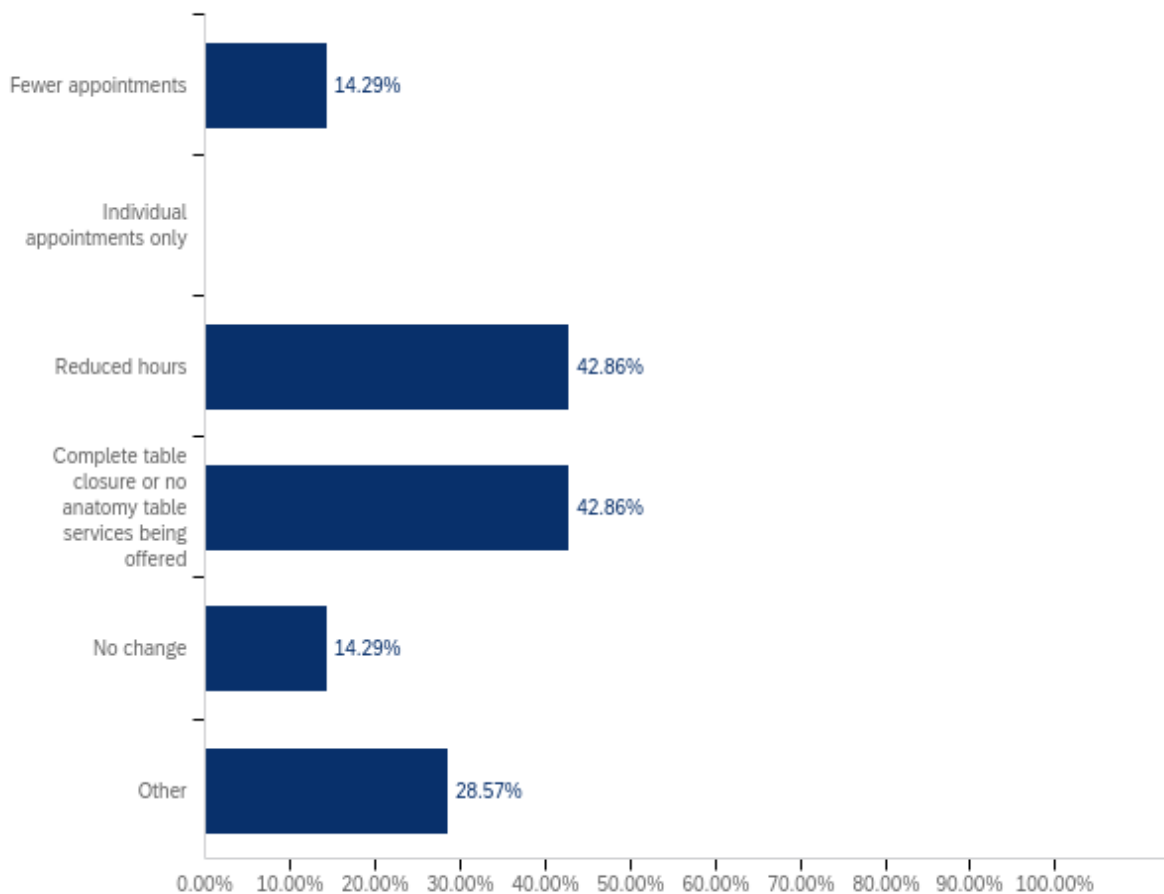


Figure 5. Summary of responses to how participating libraries modified VAT users' services during the COVID-19 pandemic.

Respondents also shared various open-ended answers to the question surrounding notable VAT-related challenges that their libraries have experienced during the pandemic. One participant stated that their library discovered that finding staff to

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manage their VAT during the pandemic was challenging. Another participant said that their library was just starting to open their VAT as their library was reopening. One respondent communicated specific challenges regarding the physical placement and use of their VAT, stating that their table was "very heavy and flat" and received little use on the main floor of their library (although it was unclear whether this challenge was pandemic-related as stated by the respondent). This respondent said that their library eventually moved their VAT to another floor of the library to make room on the main floor for an "actual table." Another participant cited the need for additional VAT cleaning during the pandemic. This participant stated that they posted signs with reminders for users to sanitize and dry their hands before table use while encouraging table users to use stylus pens, which were regularly sanitized and returned. Another respondent stated that switching to the online version of the Anatomage software, TableOnCloud, was seamless for current users but that training users on that software came with its challenges. Finally, one respondent reported that their library had no noted challenges to share.

Another survey topic analyzed cleaning practices that libraries used for their VATs before and during the COVID-19 pandemic. Three participants shared that their VATs were cleaned with microfiber cloths, and one of the three stated that they also used "non-alcohol or ammonia-based cleaners" and the microfiber cloth. One respondent cited the use of computer screen cleaner, while another mentioned using glass cleaner for their VAT. Two respondents did not report that any products were

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used to clean their VATs. A follow-up question asked what products libraries used to keep their VATs clean during the pandemic. Two respondents stated that their libraries closed their VATs during the pandemic. Another participant cited "same as before," indicating their continued use of microfiber cloth along with non-alcohol or ammonia-based cleaners for VAT cleaning purposes. One respondent shared that their library used disinfectant wipes and implemented a hand sanitizer requirement for their VAT users. Another participant's library used glass cleaner to clean their VAT. Two respondents indicated that no cleaning products were used on their VATs during the pandemic because of the closure of their tables.

### **Discussion**

While virtual anatomy tables are not commonly seen in library settings, a small number of libraries are adopting or showing interest in acquiring these tables to support anatomy learners within their communities. This survey revealed that only 23% of respondents are affiliated with libraries that own VATs. Among those respondents from non-VAT owning libraries, only 29% stated that their libraries were either interested or possibly interested in acquiring a VAT at a later date. This study's small sample size does not provide enough data to indicate whether libraries are favorable venues for virtual anatomy tables. Further study would be needed to explore why libraries choose or do not choose to acquire VATs.

This survey compiled some initial data on the types of libraries that currently own VATs. Libraries affiliated with academic medical centers or medical schools

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comprised the majority of VAT-owning libraries in this survey (72%, n=5). Other types of libraries that owned VATs included a nursing/allied health/health sciences library and a general college/university library. These results suggest that VATs may be more relevant to libraries within academic medical centers or medical school settings, possibly because they are more likely to have sizable numbers of anatomy students within their learning communities. This survey did not identify any VAT ownership among public or other types of libraries. However, these libraries may become interested in exploring VATs if their constituencies express interest in these tools for independent and group study opportunities.

Additionally, this survey did not identify any K-12 school libraries as VAT owners. However, Anatomage's case studies on its website include studies of high schools that currently own Anatomage Tables (Anatomage, 2018b), revealing that some schools that own VATs locate them in labs or classrooms outside of their libraries. Additionally, one survey respondent reported that while their library previously housed a VAT, it was later moved to another site (a simulation center) on their campus. Therefore, libraries of all types who are interested in exploring VAT ownership may want to reach out to other departments or stakeholders within their organizations to determine the most suitable location(s) for their VATs.

One key issue that each library that owns a VAT must address is who will be responsible for managing table services for their library. Survey participants described their table managers as a mix of library staff/associates, library IT staff, a visualization

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specialist, and a clinical education librarian. These responses infer that libraries have various options for VAT oversight, so they may want to consider who in their libraries would be best suited to oversee VAT upkeep, manage VAT appointments, and provide training and support for VAT users.

Within this survey, Anatomage was the most commonly owned brand (86%, n=6). One contributing factor may be that Anatomage actively markets its tables to libraries, as evidenced by Anatomage's participation as an exhibitor for the 2019, 2020, and 2021 annual meetings of the Medical Library Association (Medical Library Association, 2020a; Medical Library Association, 2020b; Medical Library Association, 2021). Conversely, one respondent stated that their library owned an Ideum Touch Table, a brand unknown to the authors prior to the survey's launch. According to Ideum's website (Ideum n.d.-a; Ideum n.d.-b), Ideum provides multitouch tables and displays that can run various software programs, including those related to the study of anatomy. One possible advantage that Ideum tables have over other anatomy tables is that they have screens with multitouch capabilities, which is a feature that is not commonly seen with other VAT brands (Ideum n.d.-a). Another potential benefit to Ideum tables is that they can run multiple software programs (Ideum n.d.-b). While the Ideum survey respondent did not highlight these possible benefits, Ideum tables may be a good choice for libraries interested in acquiring touch tables that offer the flexibility of use through various software programs, including anatomy learning tools.

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Another central aspect of this survey revolved around ascertaining the libraries' methods to manage user access to their VATs. Survey respondents cited selected methods to facilitate user access to their VATs, including walk-in/on-demand usage, individual and group appointments, and reservations managed online or via emails or phone calls. While all of the respondents whose libraries owned VATs reported offering walk-ins/on-demand usage for their users, most of them (86% n=6) also accepted individual and group appointments that could be reserved online, via email, or by phone. Libraries that are new or prospective VAT owners may need to consider which methods they would prefer to use to provide users with VAT access, including deciding whether to allow users to make VAT reservations. Libraries interested in using a reservation system for scheduling VAT appointments may want to explore what tools their libraries already use to manage reservations (such as Springshare LibCal© or similar applications) to see if those tools would also be suitable for supporting VAT reservations before considering alternate tools or options.

The COVID-19 pandemic caused some libraries to modify the VAT services they provided to their users. Three survey respondents whose libraries owned VATs stated that their libraries reduced VAT hours, while another three respondents indicated that their libraries completely closed their VATs during the pandemic. Additionally, one respondent reported accepting fewer VAT appointments or stated that they did not change their VAT services during the pandemic. One respondent shared that while their library closed their physical VAT, they offered virtual anatomy software to their remote

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users. The trend of pausing or modifying VAT services aligns with building closures or reduced operating hours and services that occurred with many libraries during the COVID-19 pandemic (Ayre & Craner, 2020). As VATs have touchscreens that may be considered "high-touch" surfaces accessed by multiple users, some libraries may have chosen to restrict user access to their VATs during the pandemic to help keep their users safe from illness (Doak, 2020). Libraries considering purchasing or implementing VAT services during the pandemic should consider what measures they feel are needed to protect their prospective users as they interact with their VATs.

Moreover, libraries will also need to contemplate managing their VATs after the pandemic subsides. Four survey respondents with VATs indicated that their libraries were planning to resume pre-pandemic operations once the pandemic subsided. In contrast, about 30% (n=2) of these respondents said their libraries were unsure about their post-pandemic plans for their VATs. One respondent stated that their library hopes to continue offering virtual anatomy software to its anatomy learners in addition to reinstating pre-pandemic VAT operations. This response raises a significant point that libraries may wish to also provide their users with virtual anatomy software options that can be used remotely during future VAT closures or reduced hours of operation. McClurg et al. (2015) provide a comparative overview of several subscription-based anatomy electronic resources that libraries may explore when considering virtual anatomy software options for their users, including Acland's Video Atlas of Human



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Anatomy, anatomy.tv, Visible Body Human Anatomy Atlas, and other virtual anatomy software platforms.

One question of this survey allowed respondents to share any notable challenges their libraries have experienced with their virtual anatomy tables during the COVID-19 pandemic. Two challenges that respondents shared included identifying staff to assist with VAT management and determining VAT location based on library users' needs and interests. One survey participant shared challenges their library experienced with training new users to use anatomy learning software virtually during the pandemic. These responses highlight an ongoing consideration for libraries that own VATS, which revolves around supporting the training needs of VAT users and those of library staff who assist and train their VAT users. Some VAT vendors may provide initial training for libraries with newly acquired tables. Afterward, libraries will need to address the ongoing training needs of library staff, anatomy course instructors, students, and other interested parties. While reviewing the literature, we noted that several libraries provide online training guides and tutorials for their VAT users. New VAT-owning libraries may want to consider creating personalized online training guides or video tutorials and sharing vendor-created training materials with their users and library staff who support VAT users.

VAT placement is another variable that libraries will need to contemplate when implementing VAT services in their facilities. Libraries may want to explore placement options that allow users to easily access their virtual anatomy tables while allowing

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library staff members to assist users and manage their VATs while readily in use.

Additionally, libraries offering their VATs for anatomy-related instruction or lab sessions and individual/group study appointments may need to determine how VAT placement can accommodate these activities while allowing library staff to provide direct VAT oversight and user assistance as needed.

The discussion of VAT cleaning was examined more closely in the survey section that explored cleaning practices of VATs before and during the COVID-19 pandemic. For cleaning and disinfecting, Anatomage suggests that their tables can be cleaned with isopropyl alcohol, and disinfecting wipes can be used on both the glass and frame, but that excessive use of alcohol can wear down the touchscreen's glass coating. Anatomage also cautions that aggressive cleaning agents, abrasives, and heavy pressure should be avoided (S. Chester, personal communication, May 28, 2020). Several respondents listed microfiber cloths and non-abrasive cleaners as their tools of choice for VAT cleaning before and during the pandemic. Respondents also mentioned disinfectant wipes and glass cleaners as items that they used for VAT cleaning. Some libraries encouraged the use of hand sanitizer and stylus pens by users and staff interacting with their VATs before and during the pandemic. Two respondents indicated that they were not using cleaning products on their VATs before the pandemic or at this time. These responses reveal that several libraries have implemented regular cleaning regimens for their VATs using various methods. Libraries that have or plan to

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acquire new VATs may want to explore what cleaning methods and supplies (if any) they would like to incorporate into their VAT maintenance workflows.

### **Limitations and Further Study**

A primary limitation of this preliminary study relates to the small sample size of the online survey, which increased the possibility of sampling bias among the participants who responded. Furthermore, while we successfully disseminated the survey among members of 46 library-focused email listservs, we could not share the survey with many other similar listservs because those listservs were restricted to members only. Additionally, the small number of respondents whose libraries owned VATs may not represent the overall population of VAT-owning libraries. These limitations suggest that the survey results may not be generalizable to the VAT-owning library population. Another limitation of this preliminary study is that it did not inquire why libraries did not desire to acquire VATs. Because of this limitation, the survey results are not generalizable to most libraries, including those that support anatomy instruction.

This study reveals several potential areas for further research. One area of further study could explore why libraries are not interested in purchasing VATs, which we did not examine in this study. Other potential research areas could include how libraries select their VAT managers among their existing staff members, how libraries determine the hours of operation for their VATs, and the number of simultaneous users they allow for group appointments. Future research could also explore how well VATs support student learning initiatives compared with web-based virtual anatomy learning

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tools provided by libraries and determine which VAT brand(s) best support anatomy learners in library-specific settings. Another potential area of research could analyze VAT usage data within single libraries or across various library settings.

### **Conclusion**

Libraries can support their constituencies by serving as universal locations for virtual anatomy tables to engage users affiliated with various anatomy learning groups or anatomy-focused courses. However, VATs are not essential items for libraries, and they can be expensive, long-term investments for libraries to undertake. Additionally, some libraries may be located within campuses, institutions, or communities that have VATs in other nearby locations. Thus, interested libraries may benefit from exploring evidence-based decision-making strategies for emerging technologies, such as conducting environmental scans, gathering potential user feedback, and other techniques suggested by Hayman and Smith (2014). These strategies could help libraries determine whether VATs would bolster the learning and teaching needs of their anatomy learners and instructors. Interested libraries may also benefit from reaching out to other libraries that own VATs to discuss their experiences and learn more about the pros and cons of providing VAT services within library settings. To assist with this information-seeking process, we have shared our experiences facilitating a virtual anatomy table within our library in an upcoming case study (Dixson & Kirkpatrick, in press). In addition, we plan to compile extensive qualitative data from VAT-owning libraries in an upcoming study and share those results in a future publication. Finally,

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for those libraries that decide to invest in a VAT, we advise that they devote time to planning who will manage their VATs and navigate VAT management and cleaning processes, based on the areas explored within this study.

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