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Welcoming Autistic Students to Academic Libraries through Innovative Space Utilization

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"If the library can serve as a safe and welcoming place for these students, it will help contribute to their ultimate college success." (Anderson, 2018). Certain characteristics of autism spectrum disorder can make it challenging for autistic college students to make use of academic libraries. High levels of sensory stimulation and the need to understand and comply with neurotypical social norms can make library spaces feel unwelcoming and difficult to use. West Chester University Libraries decided to develop a dedicated space for our growing cohort of autistic students to study. This article will discuss the reasons why autistic students may find academic libraries challenging as well as the considerations and process of developing a separate space for autistic students within a library.

Introduction

Autism spectrum disorder (ASD) is a neurodevelopmental disorder that affects executive functioning, verbal and nonverbal communication, and sensory processing abilities in individuals. The diagnostic criteria for ASD include persistent and pervasive deficits in social communication and social interaction and restricted, repetitive patterns of behavior, interests, and activities (American Psychological Association, 2013). Currently, the prevalence of adults aged 18 and older diagnosed with ASD in the United States is 2.2% of the population (Centers for Disease Control and Prevention, 2020). According to the National Autism Indicators Report, over 700,000 autistic youth will enter adulthood in the next decade (Shattuck et al., 2018). In 2015, Roux et al. reported that 36% of autistic young adults attended college. Overall, the data consistently shows that autistic individuals are attending college at a high rate and will continue to do so in the near future. In most cases, autistic students are accepted into college by meeting the same admissions criteria as all other student applicants. They are academically ready for college; however, they often bring a unique set of traits and characteristics that can affect how they utilize campus services and spaces. Campus libraries are some of the many spaces they need to navigate.

Architecturally, academic libraries vary from large, open, energetic spaces to small, dark, quiet spaces. The variety in physical spaces can be confusing and overwhelming for all college students to navigate, whether neurotypical or neurodivergent. The word neurotypical refers to individuals with typical brain functioning. However, many people, including autistic individuals, are neurodivergent, meaning their brain functioning is different in some ways. Autistic students can find navigating new and complex spaces, such as a library, even more overwhelming than neurotypical students. Using the library requires students to understand and follow both written and unwritten policies and social norms. Add in the multitude of sights, sounds, and smells, and an academic library can be a very challenging, sometimes unwelcoming, space for autistic students to visit. Nevertheless, by increasing awareness of the particular needs of this group of students, academic libraries can make changes to accommodate them.

In response to the growing population of autistic students, as well as the addition of an ASD support program on our campus, West Chester University Libraries established a dedicated study space. Keeping in mind the specific needs of autistic students, the space was created to provide an accessible and welcoming location in the library, thus, reducing barriers of using the library.

Literature Review

Academic libraries are both bustling locations of activity and interactions as well as quiet places to work or study. Students may use the library for research, to access technology, use spaces like a commons or maker space, study alone or with friends, or just simply hang out between classes. Many modern academic libraries have eschewed the traditional role of library as a place dedicated solely to silent work and embraced a wide range of uses, turning them into vibrant centers of campus life. Nevertheless, there are multiple factors that can make academic libraries difficult to use, and perhaps even unwelcoming, for autistic students. The two main factors that impact autistic students' ability to use library spaces are sensory processing challenges and the need to perceive and adhere to neurotypical social norms.

Sensory Processing Challenges

There is a very strong relationship between autism spectrum disorder and sensory processing challenges (Chamak, 2014; Crane et al., 2009; Mayer, 2017; Roberton & Simmons, 2013). The DSM 5 includes "hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of the environment" as one of the key traits of ASD (American Psychological Association, 2013). Hypersensitive people have difficulty processing sounds, light, textures, colors or visuals, and smells (American Psychiatric Association, 2013; Elwin et al., 2012; Kinnaer et al., 2016; Robertson & Ne'eman, 2008). Smells, colors, and sounds are often stronger, brighter, and louder, which can lead to much stronger reactions to these stimuli than in neurotypical individuals (Elwin et al., 2013; Smith & Sharp, 2013; Stiegler & Davis, 2010). Reactions can vary from discomfort to even pain and a desire to escape from the stimuli (Smith & Sharp, 2012). Hyposensitive individuals, on the other hand, are attracted to or seek out these stimuli (American Psychiatric Association, 2013; Elwin et al., 2012; Kinnaer et al., 2016; Robertson & Ne'eman, 2008). This may lead to individuals becoming distracted from the work at hand. Both types of sensory processing challenges are especially difficult to deal with if the stimuli are unpredictable and cannot be easily controlled (Robledo et al., 2012). Unpredictability and lack of control are issues in many public spaces, including libraries.

Autistic college students may have problems when encountering spaces that are loud, have poor acoustics, or are chaotic in noise, visuals, and activity. Some have reported that their sensory sensitivities to noise, light, and smells interfered with their ability to study (Anderson et al., 2018; Cai & Richdale, 2016; Gurbuz et al., 2018; Madriaga, 2010). Sensitivity to noise is one of the most commonly cited issues. Van Hees, Moyson, and Roeyers (2015) found that autistic students avoided certain spaces and locations on campus, including the library, due to stress from sensory overload of

noise. Anderson (2018) found that students visiting the library think it is "too loud and distracting." Loud noises make it difficult for students to concentrate and can increase anxiety (Cai & Richdale, 2016; Landon et al., 2016; Robertson & Ne'eman, 2008; Smith & Sharp, 2013). In addition to noise, other sensitivities that may impact students trying to use the library are visual (including lights, colors, and patterns), olfactory, and tactile (Robledo et al., 2012; Lizotte, 2018). Neurotypical library staff and students often do not even notice these types of stimuli, much less find them distressing.

Mainstream Spaces and Social Norms

Library spaces that are too quiet, however, can increase anxiety in autistic students stemming from difficulties with social interactions as well as difficulties with controlling the volume of their own voices (Madriaga, 2010; Robledo et al., 2012; Smith & Sharp, 2013). Anderson (2018) found that autistic students in libraries sometimes do not know "how to adapt to social norms in an environment that is too quiet" (p. 650). The fact that some areas of a library may be too loud and others too quiet can make it difficult for autistic students to find a welcoming space. Once they have found a space, if they are unable to use it later, because it is occupied by others, that can create further stress. Going beyond just noise, Bertilsdotter Rosqvist's (2013) research argues that spaces that are shared with neurotypical people (frequently called either 'neurotypical' or 'mainstream' spaces) are often unwelcoming to autistic people, because they feel pressured to conform to neurotypical social norms. This makes these mainstream spaces "inaccessible in a more direct way for people with autism" (Bertilsdotter Rosqvist, 2013, p. 370). If shared spaces are innately unwelcoming, then separate spaces may be a better option. Sarrett (2017) argues that separate spaces may particularly benefit autistic students, since they "are dedicated to individuals who share certain social identities, most often those considered to be of an outsider status (e.g., 'gay space'), [and] can feel safe and inclusive" (p. 689).

Space Design Recommendations for Autistic Individuals

Due to sensory difficulties, creating environments and spaces for autistic individuals that are neutral and consistent is strongly recommended (Kinnaer et al., 2016; Smith & Sharp, 2013). Avoiding overwhelming or unnecessary stimuli is key to developing these spaces, including too many colors or patterns; too many visuals, such as pictures, rules, or signage; and too much noise (Cai & Richdale, 2016; Kinnaer et al., 2016). It can be difficult for libraries to accommodate important sensory aspects, but, according to Mostafa (2008), adapting, reconfiguring, or creating spaces that take sensory needs into account can reduce or eliminate sensory challenges before they occur. Mostafa's study showed that using acoustic modifications to reduce sound and provide physical and visual boundaries helped increase attention span and reduce self-stimulatory (or, stimming) behavior. Creating a consistent environment increases the ability of the student to be organized and focused as well as decreases distractions (Kinnaer et al., 2016).

Following a 2008 study on architecture for autism, Mostafa (2014) next developed specific design guidelines referred to as ASPECTSS: acoustics, spatial sequencing, escape spaces, compartmentalization, transition spaces, sensory zoning, and safety. The guidelines consider the spectrum of sensory challenges autistic people may have and provide a framework for adapting or creating autistic friendly spaces. While her initial research focused on applying ASPECTTS to homes, several of the guidelines are also very informative for public spaces such as libraries. As discussed above, acoustics are a big issue for academic library spaces. Sensory zoning is another. Mostafa (2008) found that "the autistic user identifies the architectural environment around him or her in accordance to sensory zoning" (p. 205). Neurotypical students may approach library spaces according to functionality but autistic students are primarily focused on the sensory experience. This led to the recommendation of delineating spaces to either be high-stimulus or low-stimulus depending on the designated function of the space (Mostafa, 2008; Mostafa, 2014). Study space is an example of space that should have low levels of stimuli. The concept of compartmentalization suggests that tying spaces to specific activities and functions helps provide structure and consistency for autistic individuals, which can improve focus and concentration (Mostafa, 2008; Mostafa, 2014). Altogether, in order to be welcoming to autistic

students, library spaces should be dedicated to a single purpose, provide consistency and predictability, and have low levels of sensory stimulation.

Separate vs Shared Spaces

Whether due to sensory challenges or a general discomfort or sense of unease, many autistic students will find it difficult to visit the library and use shared study spaces. One recommendation is to avoid large, open, and multi-use spaces to reduce or avoid sensory challenges for autistic individuals (Mustafa, 2018). Cullen's 2015 study showed that "group work environments [can] accentuate [students'] difficulties with social communication" (p. 95). However, many academic libraries are dominated by these large, open spaces. Some scholars have suggested that providing a separate space for autistic individuals is more beneficial than forcing them to use mainstream space (Bertilsdotter Rosqvist, 2013; Sarrett, 2018). A separate space allows autistic individuals to use the space without feeling the stress of needing to conform to neurotypical rules. Sarrett (2017) specifically suggests separate spaces as something that may benefit autistic college students, because they "can feel safe and inclusive" (p. 689). There are additional potential benefits of a separate space, especially in an academic library. One is that the space could be smaller. Having a smaller, controlled space is more conducive to studying and getting work done, as it can greatly reduce external distractions (Anderson, 2018; Kinnaer et al., 2016; Pionke et al., 2019).

A separate space can also make it easier for students to socialize, as it offers an opportunity for controlled social interaction with peers (Bertilsdotter Rosqvist, 2013; Sarrett, 2018). In recent studies, autistic students indicated developing relationships with peers and faculty would help them be more successful in college (Accardo et al., 2019; Bailey et al., 2020). Autistic students want to feel connected at college and are looking for social support (Bailey et al., 2020; Sosnowy et al., 2017). Since autistic individuals can struggle with new experiences and may feel overwhelmed by them, having a dedicated, accessible room or location eases those difficulties and makes the student feel more welcome and at ease in the library (Anderson, 2021). Further, a smaller, separate space is likely to provide more consistency and predictability, which decreases stress and improves the overall experience of students (Smith & Sharp, 2013; Van Hees et al., 2015; Mostafa, 2008).

The addition of a dedicated library space for autistic students supports many factors for the success of students in college. While some campuses have dedicated autism support programs that provide a place where autistic students can meet and interact, many do not. In those cases, a dedicated space in the library could provide even more benefits. Having a dedicated space in the library could possibly place students closer to some academic supports, such as tutors and writing centers (Anderson, 2021). On a campus without an existing dedicated space for autistic students, a space in the library could also potentially serve as a safe and comfortable social space.

Case Study

Our University, Library, and Autism Support Program

West Chester University is a comprehensive regional university with around 17,000 students. The main library, the Francis Harvey Green Library, was built in two stages in the 1960s and 1970s. As it has never had a major renovation, the building has many of the shortcomings common to academic libraries of that era. There are only a handful of private or small group rooms available for study, and those few are in great demand. Many of the study areas in the library are large and open and are either adjacent to equipment (computers, printers, and scanners) or have a regular traffic flow of people moving through them. It is a very busy place, with around 300,000 people entering the building during an average semester. There are also many areas that have very little or no natural lighting. Quieter and less busy study areas are often tucked away in remote parts of the building, forcing students to seek them out. All in

all, the building has many features that could discourage students with sensory challenges, or even a dislike of crowded spaces, from using it.

In fall 2016, West Chester University launched an autism support program. Under the leadership of the program director, it quickly grew from just five students in the first year to more than 50 by fall 2019. The University Libraries were one of the program's very first campus partners, with a small group of librarians initiating contact during the program director's first weeks on campus. Given the limitations of the physical space, the librarians wanted to do all they could to make the main library a welcoming place. They quickly established a regular event to introduce the students in the program to the main library and its staff and services. As the program grew, a number of the students became regular users of library spaces and services. A number of students visited the research help desk and scheduled individual appointments with librarians. Some students even interned within the libraries. The active outreach on the part of the librarians almost certainly played a big role in this.

In early fall 2019, the Autism Program Director reached out to the Assistant Dean of Libraries with a request. Her students loved their dedicated program space on campus and wanted it to be open on the weekends for studying. As much as the director would have liked to comply with that request, staffing and financial constraints simply would not allow for it. She inquired if the library would be able to provide a space, specifying that it would be for students to work or study, rather than a social space or a sensory room. After an initial meeting to determine the need, the Assistant Dean of Libraries formed an ad hoc team to discuss if the library could fulfill this request. It was comprised of the Assistant Dean, the Access Services Manager, two librarians who had worked closely with the program, the Library Communications Technician, and the Library Technician who regularly oversees building operations on Saturdays.

The first question the team addressed was whether this was something the library wanted to do. The answer was an unqualified yes. For all of our outreach successes, team members were also aware that there were very likely other students in the autism support program who were not using the library due to the barriers the physical library spaces present. A dedicated separate space could possibly alleviate not only challenges related to sensory reactions, but also the potential hesitation of some students to use mainstream spaces that were dominated by our neurotypical students. The team immediately saw that a separate space might feel more accessible and, thus, encourage more of our autistic students to start using the library. However, making it happen might be a challenge.

The Space

Finding an available space to use was the biggest challenge. Large parts of the library are completely open and sectioning off areas were not practical. Most of the smaller rooms were either being used for specific library purposes or had long ago been claimed by other campus groups. In the end, one option was identified—a room that we used as a classroom (Room 409) but only on weekdays. Since the program was only in need of a space during weekends, the team felt the room could easily be transitioned for use by the autism program students during those times.

In addition to being available, the location conformed to many of the criteria that would help students with sensory and social challenges feel welcome and comfortable. One research study on autism-friendly architecture concluded that, to support autistic individuals, "the material environment should be predictable, consistent, comprehensible, and controllable" (Kinnaer et al., 2014, p. 185). Happily, Room 409 contained many features that work under those guidelines as well as the ASPECTSS guidelines (Mostafa, 2014).

As mentioned, noise is one of the most commonly cited sensory issues for autistic individuals, and Mostafa (2014) specifically included addressing acoustics in the ASPECTSS guidelines. Room 409 is located on one of the quiet study floors of the library, so there was little worry of large student groups on the floor or a lot of background noise from conversation. Seating on that floor is also not directly adjacent to the room. Room 409 also has relatively little electronic equipment that could result in bothersome or distracting noises (Elwin et al., 2013; Madriaga, 2010).

Lighting

The brightness, hum, and flickering of lights have all been mentioned as causing unpleasant sensory responses (Landon et al., 2016; Lizotte, 2018). The lighting in Room 409 is flexible, having two sets of ceiling lights that can be turned on and off separately. There are also several windows in the room, providing natural light. The level of natural light is also controllable, as the windows are equipped with blinds. While there is not complete control over lighting levels in the room, the level of flexibility is an improvement over other spaces in the library.

Furniture

Room 409 had been developed to be a flexible instruction space; therefore, all the furniture is on casters (Appendix A). Two-person tables can be moved or separated, depending on whether people want to work in groups or individually (Appendix B). Tables can be collapsed and moved out of the way entirely. This allows for maximum flexibility and allows students using the room to customize their study space to a great extent. Plans were also made to bring two of the library's bean bag chairs into the space each weekend as an alternate seating option.

Size

The maximum occupancy of the room is 36, which is less than the number of students in the program; however, it offered plenty of room for the number of students expected to make use of it at any given time. Research has indicated that autistic individuals sometimes prefer more personal space than neurotypical individuals might in a group setting (Kinnaer et al., 2014). The larger size of the room allows for students to control how closely they sit to others.

Familiarity

Room 409 is the room we use for our orientation event the library hosts for the autism support program each year. This is important as autistic college students can struggle with new situations (Van Hees et al., 2014). The students in our campus program are familiar with the room and should feel more comfortable, since they know where it is located, have spent time in it, and hopefully have a positive experience associated with it.

In the end, the only space that the library had to offer turned out to be an excellent choice. Room 409 offered a reduced amount of potential sensory challenges than most locations in the library, allowed for some control and customization of the study experience, and offered a familiar and consistent environment. Students can go to the room during the posted hours and know they will be able to use the space and what to expect when they arrive.

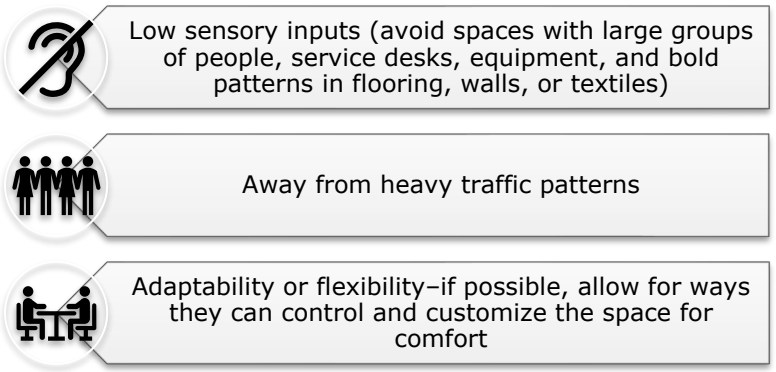

Figure 1
What to Look for in a Space for Autistic Students

The Implementation

A number of people were involved in the implementation process. The outreach librarians, library administration, and the Autism Program Director (who consulted with the program's students) all had a role in creating room usage rules. The Library Communication Technician created a handout for students as well as room signage (Appendices C and D). Since consistency and familiarity are often a comfort to autistic individuals, an effort was made to ensure that the room was set up consistently even if the work was completed by different staff (Mostafa, 2008). The Access Services Manager and Technician, who is the supervisor on Saturdays, prepared a list of instructions for setting up and breaking down the room for weekend use (Appendix E). A cart of basic supplies was also created that could easily be moved in or out of the room (Appendices F and G).

The Roll Out

The team decided to combine the unveiling of the space with the regular library event for new students in the program. As always, the group, including the program director and the program's graduate student assistants, met the librarians in the lobby, so that students did not have to find the room on their own. When a quorum had been reached, everyone traveled as a group to Room 409, making sure to identify both the stairs and elevator options. When the group arrived at the room, it was set up as it would be for weekend use—the signage was up, supplies were in the room, and extra furnishings (i.e., beanbag chairs) were brought in. This was intended to build a feeling of familiarity and comfort with the space. Snacks were provided, which were meant to help signal this as an informal event and to encourage students to think of the library as a relaxed and welcoming environment. In addition to the two librarians, the Library Technician, who supervises the building on Saturdays, also joined the group. Having the students meet the technician provided them with a familiar face and easily identifiable staff support.

There was a short presentation to discuss the room rules and what students could do if they needed help using the room. This was accompanied by the handout for the students (Appendix C). The handout was very detailed as the Autism Program Director has advised us that her students appreciate having explicit rules and guidelines to follow. It included the following information:

- Hours the space is open
- How to sign in when using the space
- Noise level for the space (quiet talking)
- How to borrow a library laptop
- How to get help (including a sample script)
- How to move the furniture (including pictures)

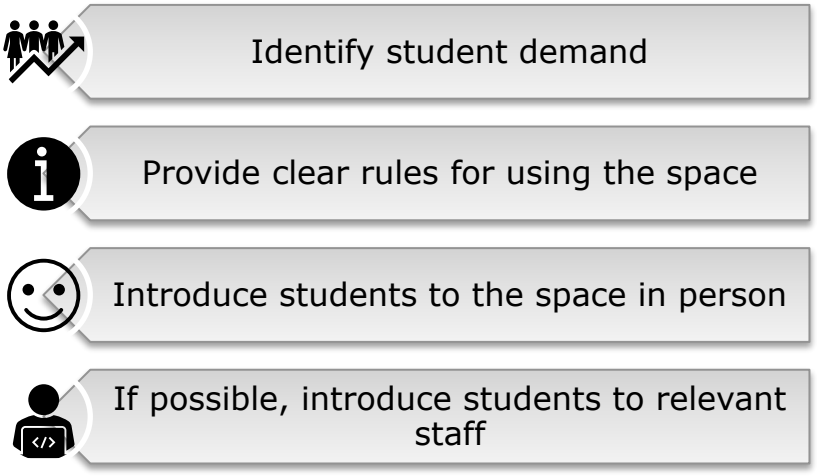

Figure 2
Implementation Tips

Outcomes and Implications

Usage data was to be collected by having students log in whenever they used the space—a process that mirrored what they did when they used the program's main campus space during the week. Unfortunately, the advent of COVID-19 in early spring 2020 curtailed the use of the room only a few months after the program had started, with the result that not even a full semester's worth of usage data has been collected. However, anecdotal evidence shows the space was used.

Although the impact of this particular project to implement a separate space cannot be assessed quantitatively at this time, there are still lessons to be learned from it. First, many academic libraries have characteristics that may make them feel unwelcoming and inaccessible to autistic students. Libraries on campuses with larger populations of autistic students may want to consider if they can provide a separate space dedicated to serve this population. Second, a dedicated space in the library for autistic students can be a more manageable project than librarians might initially imagine. Our library's implementation did not require large investments of either time or money. The project was developed by an ad hoc team in a short time frame and used existing library spaces and materials. The only significant cost was staff time. Therefore, it can serve as a realistic model for other libraries that are considering a similar project.

Future Directions

Future directions for this project will include a relaunch of the space post-COVID, including an introduction to new students, and further data collection. At that point, there will likely be a substantial number of new students taking part in the campus autism support program. Since our university was primarily remote the fall 2020 and spring 2021 semesters, this will include new students who started fall 2020 as well as fall 2021. One advantage to this situation is that most of the students in the autism support program will be either completely new to campus or returning after the long COVID break. Many autistic individuals prefer predictability and set routines (American Psychological Association, 2013). The introduction to the space at the beginning of their college careers (or immediately following a long absence from campus) will encourage them to incorporate using it into their new schedules. In addition to continuing to collect room usage data, the authors will collect feedback and suggestions directly from the students in the program through either a focus group discussion or a survey.

Conclusion

Academic libraries strive to be as welcoming as possible for all students. Yet, some of the factors that help make our spaces inviting for our neurotypical students can actually make them unwelcome for autistic students. Due to social and sensory processing challenges, navigating the physical library can feel overwhelming and confusing. This can deter autistic students from using our building and services, which can impact the success of autistic students at college. By learning more about the specific needs of autistic students, engaging in outreach initiatives, and getting creative with current spaces, academic libraries can encourage autistic students to visit and use the library. In turn, students will become more comfortable in the library, potentially engage in social interactions, and increase their chances of being successful in college.

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Appendices

Appendix A

Movable tables on casters provide flexibility for changing the room as needed.

Appendix B

View of room with movable tables.

Appendix C

Student instructions that are provided as a handout.

D-CAP Study Hall

Important Information

- D-CAP Study Hall is open during these times:
  - Saturday 12:00 pm - 5:00 pm
  - Sunday 12:00 pm - 5:00 pm
- Please log in on the instructor computer to track your attendance:
  - Link to electronic attendance form
- If you would like to borrow a laptop, visit the IMC on the first floor.
  - Take the elevator down to the first floor.
  - You will see a sign that says "IMC Help Desk."
  - Ask the person at the desk if you can borrow a laptop.
  - You can borrow a laptop for three hours.
  - Return the laptop to the IMC desk when your time is up.
- The noise level for this study space is Considerate. Respect your neighbors by talking quietly when working in groups.

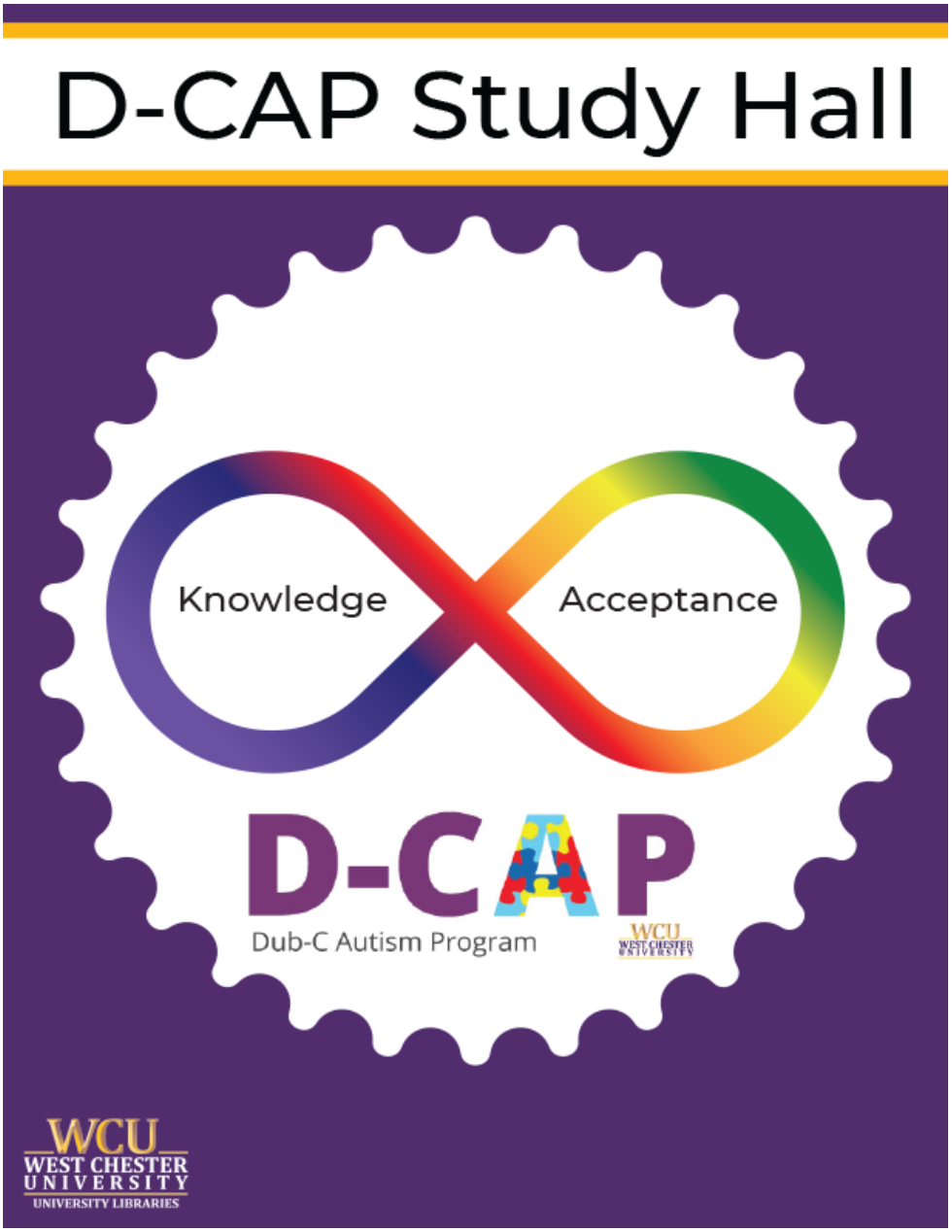
Telephone Instructions

- If you have a question, use this phone to call the Library Help Desk.
  - Pick up the phone and dial 2946.
  - When the Library Help Desk Answers, use this script to explain what you need:

    "Hello, my name is_____. I am in room 409. I need help with_____. Can you help me?"
- You can ask for help with things like:
  - Fixing a computer problem
  - Getting more supplies for the supply cart
  - Finding a book in the library
- When the library staff member says they are on the way, hang-up the phone and wait for assistance.

Appendix D

Room signage.



Appendix E

Staff instructions for setting up and breaking down the room.

D-CAP Study Hall

FHG 409 is reserved Saturdays and Sundays from 12 pm – 5 pm for D-CAP Study Hall.

Students have instructions to call the Library Help Desk if they need anything. Please note that any calls from extension 2067 are from room 409.

D-CAP Study Hall Cart Checklist

The D-CAP Study Hall Cart is located next to the Hold Shelf behind the Library Help Desk. It should have the following. Please replenish as necessary.

- Instruction Sheets
- 2 Door Posters
- Magnets to hang instructions and posters
- White Board Markers and Eraser
- Stapler and Staple Remover
- Pens and Pencils
- Paper clips
- Rubber bands
- Tape dispenser and tape
- Hole Puncher
- Paper - blank and lined

Open Procedures (12 pm Saturday)

- Grab D-CAP Study Hall Cart and bring to room 409.
- Unlock both doors
- Place study hall sign on both doors using the magnets on the side of the cart.
- Leave D-Cap Study Hall Cart in the back of the room near the white board.
- Hang the instructions on the white board using the magnets on the side of the cart.
- Make sure computer on podium is on.
- Move 2 White Boards from main area into 409.
- Move 2 Bean Bag chairs from the main area into 409.
- Arrange tables in pairs into 3 rows of 3.

Closing Procedures (5 pm Saturday)

- Remove the study hall sign on both doors and place on the cart.
- Make sure room is empty and lock both doors.
- Grab D-CAP Study Hall Cart and place it next to the Hold Shelf behind the Library Help Desk.

Open Procedures (12 pm Sunday)

- Grab D-CAP Study Hall Cart and bring to room 409.

- Unlock both doors
- Place study hall sign on both doors using the magnets on the side of the cart.
- Leave D-CAP Study Hall Cart in the back of the room near the white board.
- Make sure computer on podium is on.

Closing Procedures (5 pm Sunday)

- Move 2 White Boards from 409 into main area.
- Move 2 Bean Bag chairs from the 409 into main area.
- Remove the study hall sign on both doors and place on the cart.
- Take down instructions and place on D-CAP Study Hall Cart
- Make sure room is empty and lock both doors.
- Grab D-CAP Study Hall Cart and place it next to the Hold Shelf behind the Library Help Desk.

Accessing Signage Files

- If you need to print additional signage [a link to a shared folder is provided].
- This folder contains posters for the doors, an informational handout about the study hall, and instructional signage.

Appendix F

Supply cart.

Appendix G

Supply cart instructions.