Online Library Vs Physical Library Visit

Perceptions of Learners with Autism Spectrum Disorder (ASD)

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Abstract

This study aims to explore perceptions of a student diagnosed with Autism Spectrum Disorder (ASD) in higher education institutions specifically in dealing with their ability to use university libraries throughout their study term. Since the promotion and dissemination of information about autism awareness have been aggressively promoted throughout society, the number of students identified with autism in higher education has been increasing. Some of the students were only aware that they had been diagnosed with Autism after experiencing difficulty adjusting to campus life. Their visits to the library are part of their acclimatization to a university learning environment. However, due to the outbreak of covid 19, the students generally ought to do their library research online rather than visiting the campus library. A qualitative approach was used in this study, which included a case study of five students from diverse faculties in a Malaysian college who were selected for the study. The result from this paper is to provide some insights into how learners with autism perceive online libraries and physical libraries, as well as the differences between the two. It is found that learners with ASD feel happier using an online library rather than a visit to a physical library and librarian competency does give an impact on their social interactions. To conclude, this study reduces the gap between research on autism learners and library services in higher education settings so that university libraries will be well prepared when they receive students with disabilities concerns.

Keywords: Autism Spectrum Disorder, Self-directed learning, ASD and library,

1.0 Introduction

The number of people who suffer from ASD is just becoming larger especially among students in higher education. Among the reason, it is found that the availability of a university support system is undeniable which is counsellors, academic advisors as well as lecturers and professors in university celebrate every student abilities and uniqueness. Self-learning, presentations, and library research practices by the majority of university programs allow individuals in university to get a better understanding and tap more of their potential. Learners with autism spectrum disorders (ASD) are increasingly enrolling at institutions of higher education (IHE) as the incidence of the disorder rises. It is observed that symptoms of autism spectrum disorder (ASD) differ from each of them. Usually, ASD learners have communication and social difficulties this is either they have specific rigid interests or exhibit repetitive behaviour. A revolution is occurring in the realm of higher education. Autism

spectrum disorder (ASD) may affect a person's social, verbal, and behavioural development, and it can make life very difficult. (CDC, 2018b, para. One ongoing trend that may have a detrimental impact on university libraries is the increase in the number of university students who are diagnosed with autism

spectrum disorders (ASD). (Vanbergeijk, Klin, & Volkmar, 2008. As well, ASD kids struggle with problems such as finding it difficult to communicate or to keep eye contact. Due to a lack of social, communication, and behavioural skills, college may be quite a challenge for individuals with ASD. They might frequently struggle to get the assistance they need to complete the transition, but it is still very important. Aside from that, there is the issue of many of the programmes being provided being inadequately suited for autistic college students. (Smith, 2007; Anderson 2016; 2018). Objective of this paper is to concentrate on what academic libraries may do to assist students with autism spectrum disorders (ASD) in overcoming these weaknesses and achieving success in college.

Research questions of this study formulated as below;

1. What is ASD learners' perceptions towards the online library and physical library visit?
2. How is ASD learner's learn while using the online library and physical library?

2.0 Literature Review

Autism learners and Daily Life Skills

According to Howlin & Magiati(2017) People with autism spectrum disorder (ASD) have different life paths, and a tiny proportion of ASD sufferers will have fulfilling lives, such as living on their own and enrolling in college. To understand the causes for the lack of autonomy among individuals with developmental impairments, we must first identify the obstacles that stand in their way. As individuals with ASD get older, it is critical to pay more attention to their adaptive behaviours. When children are allowed to explore a variety of environments, they learn how to be self-sufficient, how to care for themselves, and how to interact with others. Areas such as socialisation, communication, and daily life skills, among others, are very important (Burger-Caplan, Saulnier, & Sparrow, 2018). The emphasis of the research, daily living skills include behaviours and abilities including personal hygiene and sanitation, time management, and other daily living skills The existence of limited interests and repetitive behaviours, as well as social communication problems in the context of the disease as a whole, are characteristics of the difficulty that ASD patients experience communicating and socialising.

Learning Strategies

Nisbet (2017) stated that certain methods must be used to learn how to learn. Learners often utilise learning techniques to accomplish activities that are unrelated to their present job. Successful learning necessitates the development of a certain set of skills as well as the use of effective processes for students. Being able to choose the best appropriate strategy while also changing and modifying as required Duffy (1982) refers to strategy as "the secret recipe," stating that strategies are "executive processes that are selected, coordinated, and executed." Learning to learn necessitates the use of certain techniques. Learners often use learning methods outside of particular tasks. For learners, successful learning requires the use of a certain set of abilities and efficient procedures. Being able to choose the best approach and adapt and change as needed. While tactics are referred to be "the secret formula," by Duffy (1982) that indicate strategies are an executive process that been chosen, coordinated and applied.

Knowledge usage is a subject that lends itself well to case studies since it involves a phenomenon that seems to be inextricably bound up with its surroundings. Many other studies

of decision-making behaviour, as well as this one, have identified the following features as being present in knowledge use (Greenberg et al., 1977).

- The result of a series of decisions taken over a long period that does not have a distinct beginning and ending points (i.e., do not seem to be cleanly separated from their historical context);
- Because complex outcomes have many implications, single-component models are unable to describe both the direct and indirect repercussions of these events.

- The agency's location, historical era, and other key aspects make these situations stand apart from the rest of the field.

3.0 Method

Study design

Detailed semi-structured interviews with participants were conducted to determine whether or not they were satisfied with both the trial design and the treatments they got, which included the guided self-help intervention. This study employs a case study due to the nature of this study that involves specific traits of sampling. According to Yin (1993; 2013) knowledge usage is a subject that lends itself well to case studies since it involves a phenomenon that seems to be inextricably bound up with its surroundings. Many other studies of decision-making behaviour, as well as this one, have identified the following features as being present in knowledge use

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Hence in this context of the study, a student was selected for this study voluntarily. These individuals' names were obtained from an internal faculty counsellor database. All five of the students were diagnosed with autism spectrum disorder (ASD). Three are from the social studies cluster, while the remaining two are from the science and technology course. Each of the participants agreed to participate in this brief research on their initiative.

To better understand the acceptability of treatments, a semi-structured interview is a helpful qualitative method for assessing the experiences of individuals receiving an intervention, as well as the experiences of people delivering the intervention (Beidas, Becker-Haimes, & Adams, 2017). Participants Autistic individuals under the age of 18 who had been diagnosed with moderate depression and had sought more than three sessions with a therapist met the trial's inclusion criteria.

Data Collections

Potential trial participants were notified about the study either in person by doctors at two NHS adult autism clinics or by mail to autistic people who had enrolled on two volunteer research databases, according to the study's protocol. Those who expressed an interest in participating in the research were provided with printed study material, as well as teleconference vetting relying on the evaluation criteria (Russell et al., 2017). Participating in the study required written informed permission from all eligible people who consented to participate, which includes an agreement to be invited to an interview. It was decided to use a purposive sample of individuals who indicated that they were willing to be contacted for interviews to capture the greatest amount of variance and socio-demographic and clinical variables, such as age,

ethnicity, and socioeconomic position, to capture the most variance and socio-demographic and clinical variables. Further information on how sociodemographic information was collected during the initial assessment for inclusion in the randomised controlled trial was utilised to analyse these variables. When assessing socioeconomic level. Participants were asked to participate in a single phone or email interview with the counsellor at least 3 weeks after being assigned to a group. Interviews with participants were conducted after the conclusion of the 3 -week study. To determine sample size, the concept of "data saturation" was employed, with continuous assessment of information within our sample in terms of meeting study goals and no new themes emerging from the data.

Data Analysis

In an incremental method, data collection and analysis were carried out simultaneously, with early findings affecting future data collection and analysis. When it came to analysing the data, a thematic approach was utilised (Braun & Clarke, 2006). The members of the qualitative team used line-by-line coding to construct the initial draught coding frames for the first three transcripts they reviewed. An information inductive coding and deductive coding approach were used in this research, which was determined by the study's goals and the subject guide. To enhance the accuracy and precision of the analysis, qualitative team members double-coded transcripts independently and investigated discrepancies; techniques to modify the codes were agreed upon to achieve agreement on coding (Saldana, 2016). Following that, the new coding frame was applied to all transcripts in the database. Emerging findings were taken into consideration to ensure legitimacy and external validity. transcribed transcripts from participants were separately examined and then synthesised across several subjects

Findings

Results can be categorized into three main themes of perception which involves three types of interactions; interactions between autism learners and library environment, ASD learners affective strategies which involve their social interaction and ASD learners metacognitive strategies.

The table below summarized findings from the analysis that has been conducted, which results heavily indicate that students diagnosed with ASD confirm a similar pattern as ASD learners reaction towards their learning activity as stated by a previous study. This study confirms that students at HE do struggle same difficulties especially involving with social interactions especially new learning settings, inconsistency and unsimilar environments resulted in them feeling easily overwhelmed. However, on the other hand, online interphase, virtual environment and technology serve secure learning space which learners with ASD found they feel calm and more comfortable. Didehbani et al, 2016; Mesa-Gresa et al, 2018; Andrunyk et al, 2019; Khowaja et al, 2020).

Table 1: Themes Derived From Analysis

	Online Library	Physical Library
Interaction	Safe	complicated
Affective Learning Strategies	Avatar Message online notification recognized	Anxious Face to face struggles
Metacognitive Learning Strategies	Own pace	Tiring confusing

    i.   **Interaction of Autism Learners towards Library Environment**

a . Physical Library

ASD learners state that they are happy whenever they have to pay their visit to the library. They found that a quiet library is like an escape for them. As for ASD treats, the majority an ASD found quickly feel overwhelmed when the library is full of other students, they have to sit in a large hall rather than an individual room or when they have to use a staircase compared to the elevator. A visit to the library during the weekend and night is most preferred as this situation help to calm them better. A large library with a complicated arrangement also does affect their interaction with the library environment.

- *Building, Library Physical Arrangement and another facility*

" I feel that a library is a haven for me during the weekend"

(ASD 1)

" I rather sit under the table than sit on the provided table and chair if the library is too large and very cold"

(ASD 3)

" I feel overwhelmed when I have to access the next floor using the staircase, I wish students are allowed to use the lift in my library as I don't like people staring at me coming up and down the floor repeatedly"

(ASD 4)

b. Online Library

Unlike with an actual library visit, ASD learners seems to struggle with a lot of issues related to the physical library. They are easily get disturbed with some adjustment to the tangible environment around them like the arrangement of tables and chairs, structure of the building, staircase, other visitors as well as level of noise in the library. It is found that an online library is their preferred library platform. The icons of the avatar of librarian, icon chatbox and interphase of the online library with motivational image, picture of books die to give impact to them. Their accessibility to the online library is used at their own pace. Most ASD learners used to access the online library and online database when they need to complete their learning task. The accessibility of a variety of materials contributes to happiness.

- *Online database, webinar, online course*

  "I feel safe when I need to use my online library university for my assignment"
  (ASD 2)
  "The interphase of the online library helps me to focus to the completion of my study"
  (ASD 5)
  " The avatar is helpful.i don't need to walk far just to ask help from the librarian"
  (ASD 1)
- Accessibility

  "I'm very happy when I have the access to any information from my university library"
  (ASD 3)

ii. ASD learners Affective Strategies

Affective methods require students to interact with others outside of their learning comfort zone. They need access to additional mediums, platforms, or entities to assist them with their learning job.

a. Physical library
- *Librarian at the helpdesk, security guard and public crowd*

Students with autism spectrum disorders (ASD) who have visited a library have said that they must deal with their anxious emotions when it comes to interacting with a librarian at the helpdesk or the library counter. They are also constantly confronted with the sensation of being refused or interrogated when they need to get entry via the front door, particularly when there is a security guard present. Furthermore, they are uneasy about the huge number of strangers who are loitering in the library hall with them.

" I always have a burden to approach the librarian help desk"

(ASD 3)

" I feel nervous with my ID not functioning at the library entrance. The security guard made me feel anxious"

(ASD 5)

b. Online Library
- *Chatbox, avatar online library communication platform*

If all that is required of online library learners with ASD is to engage with a library avatar or to get assistance from a librarian via a chatroom that is accessible the majority of the time, this makes them feel safer. This is because they constantly believe that they are being discriminated against by the general population when they have to interact in person. Being able to interact with people they are unfamiliar with while on the internet gives them greater confidence. When dealing with a knowledgeable librarian, however, learners with ASD can communicate their views. They feel accepted and acknowledged, which is important because they often feel wrong and misinterpreted, either by using a different mode of communication or asking unstructured questions, which confuses the other person in terms of understanding the needs and requirements of autistic students. It has been discovered that when learners engage in online chat or online help with a librarian who uses certain emojis and a good tone of writing, they experience a reduction in learning anxiety and an increase in confidence.

" I am so happy if my message replied in the library chatbox"

(ASD 2)

" I feel cool the librarian could help me with all materials that I need"

(ASD 4)

iii.   ASD learners Metacognitive Strategies
a. Physical Library

- *Physical abilities*

Accessing the library building has proven to be a challenging experience for kids who suffer from autistic spectrum disorders. In part as a result of how differently recalling the entrance compares to remembering the departure, the individual has an overpowering sense of loss. Certain students, particularly those who are acquiring new abilities, may experience anxiety while using the staircase, elevator, or escalator.

" I don't think that I can walk that far to the computer room in my library

(ASD 4)

" I found that my feet got weak when I have to climb the staircase"

(ASD 3)

b. Online Library
- *Online response rate*

On the other hand, using the internet to access a library has a distinct effect and experience. It is discovered among learners. The experience of using an online library was more pleasant and interesting for those with autism. All of this, however, is dependent on the response rate. The students' concerns about finishing their work are alleviated by quick responses to their emails and chats.

"I am so excited when my email is promptly replied by the online library"

(ASD 1)

Discussion

As learners with autism often experience sensory overload, the library provides a safe place for them to escape from the overwhelming amount of sensory information. Excessive and inadequate noise in the library is causing further problems, as has been previously stated. There seems to be no consensus on whether a library should be quiet, with spaces designated for solitary study, or collaborative, with rooms designated for various types of work in separate sections. While students with ASD may go to the library primarily to avoid being around other people, they may also do so to get more flexibility to learn more about the world around them and to enhance their ability to interact and communicate with others. In many cases, a student's decision to position himself or herself in the library results in him or herself using library resources, such as eating or sitting in an undesignated area. And last, in academic libraries, there is a notable lack of contact with other library users. However, this is often not owing to a lack of desire to interact with others.

Implications

Library practices, management and policymakers

When it comes to assisting members of this category, there is no one approach that libraries may use. The fact that each person in this group exhibits ASD characteristics differently than the others is, of course, an anticipated result that conforms to the current body of information. But some trends appeared that might be utilised to improve the services and processes offered by academic libraries to better fulfil the needs of these students in the future.

Individuals who are hesitant to engage or who spend most of their time at the library alone may benefit from the assistance of librarians in facilitating informal group involvement. Because we know from statistics that many college students use libraries to pursue their hobbies, it is possible to organise them according to certain interests. While we recognise that each child will have a unique set of interests, groups may be created to cater to a broad variety of interests. The Education of Neurotypical Students Libraries offers a unique opportunity to organise activities and events for the campus community, which they should make use of to raise awareness of students with ASD on campus and increase their acceptance. Important because neurotypical students are more accepting of their peers' oddities when they are aware that the individual may have an ASD diagnosis, which is critical. Librarians are responsible for ensuring that students have access to educational possibilities, and this is an important topic that requires a great deal of attention.

Conclusions

This was a study on students with autism and their engagement with academic libraries. A lot is still to be discovered when it comes to the social model of disability studies and this information has a profound effect on the individuals in question, especially because of the ASD present in many people.

References

Anderson, Amelia. "Autism and the academic library: A study of online communication." *College & Research Libraries* 79, no. 5 (2018).

Anderson, Amelia. 2016. "Wrong Planet, Right Library: College Students with Autism Spectrum Disorder and the Academic Library." PhD diss., Florida State University.

Andrunyk, V., Pasichnyk, V., Antonyuk, N., & Shestakevych, T. (2019, September). A complex system for teaching students with autism: The concept of analysis. formation of IT teaching

complex. In *Conference on Computer Science and Information Technologies* (pp. 721-733). Springer, Cham.

Akin, Lynn, and Donna MacKinney. 2004. "Autism, Literacy, and Libraries: The 3 Rs = Routine, Repetition, and Redundancy." *Children and Libraries* 2 (2):35–43. doi: 10.5860/cal

Braun, Virginia, and Victoria Clarke. "Novel insights into patients' life-worlds: the value of qualitative research." *The Lancet Psychiatry* 6, no. 9 (2019): 720-721.

Beidas, Rinad S., Nathaniel J. Williams, Emily M. Becker-Haimes, Gregory A. Aarons, Frances K. Barg, Arthur C. Evans, Kamilah Jackson et al. "A repeated cross-sectional study of clinicians' use of psychotherapy techniques during 5 years of a system-wide effort to implement evidence-based practices in Philadelphia." *Implementation Science* 14, no. 1 (2019): 1-13.

Cooper, Kate, Laura GE Smith, and Ailsa Russell. "Social identity, self-esteem, and mental health in autism." *European Journal of Social Psychology* 47, no. 7 (2017): 844-854.

Didehbani, N., Allen, T., Kandalaft, M., Krawczyk, D., & Chapman, S. (2016). Virtual reality social cognition training for children with high functioning autism. *Computers in human behavior*, *62*, 703-711.

Everhart, Nancy, and Kristie L. Escobar. "Conceptualizing the information seeking of college students on the autism spectrum through participant viewpoint ethnography." *Library & Information Science Research* 40, no. 3-4 (2018): 269-276.

Howlin, Patricia, and Iliana Magiati. "Autism spectrum disorder: Outcomes in adulthood." *Current opinion in psychiatry* 30, no. 2 (2017): 69-76.

Khowaja, K., Banire, B., Al-Thani, D., Sqalli, M. T., Aqle, A., Shah, A., & Salim, S. S. (2020). Augmented reality for learning of children and adolescents with autism spectrum disorder (ASD): A systematic review. *IEEE Access*, *8*, 78779-78807.

Mazefsky, Carla A., Kevin A. Pelphrey, and Ronald E. Dahl. "The need for a broader approach to emotion regulation research in autism." *Child development perspectives* 6, no. 1 (2012): 92-97.

Mesa-Gresa, P., Gil-Gómez, H., Lozano-Quilis, J. A., & Gil-Gómez, J. A. (2018). Effectiveness of virtual reality for children and adolescents with autism spectrum disorder: an evidence-based systematic review. *Sensors*, *18*(8), 2486.

Nisbet, J., & Shucksmith, J. (2017). *Learning strategies*. Routledge.

Reed, F. D. D., Hyman, S. R., & Hirst, J. M. (2011). Applications of technology to teach social skills to children with autism. *Research in Autism Spectrum Disorders*, *5*(3), 1003-1010.