The Experiences of Online Students with Permanent Acquired Memory Related Issues: A qualitative study

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Research Article

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Abstract

Higher education institutions within the United Kingdom have been making efforts to reduce the educational disparity that occurs between abled students and those with learning disabilities. Students with learning disabilities are more likely to abandon their studies than their able counterparts. However, given the unprecedented shift to online learning during the Covid − 19 pandemic, it is likely that those with learning disabilities have faced new challenges. Within psychology research into online learning, one population that has received little attention is students with permanent acquired memory-related issues. Therefore, this qualitative interpretative phenomenological analysis study explores the student experience of six mature university students who started online learning before Covid-19 to understand (i) what online learning means for students with permanent acquired memory related issues and (ii) what barriers and facilitators they encountered within their academic journey. Three themes were developed (i) Negotiating the challenges of online learning (ii) Online learning and the emotional experience, and (iii) Avoiding the gaps presented by online learning. The findings suggest that students’ online experience with permanent acquired memory loss was complex. Academic staff’s misunderstanding and the impact of Covid-19 combined to create several challenges, but support and individualised strategies aided course adherence.

Introduction

Learning disabilities impact the lives of over one million individuals within the United Kingdom – 2.16 % of the UK population (Mencap, 2021). Learning disabilities include any diagnosis that has a negative effect upon memory, attention, reasoning, visual perception and language, or any combination of these aspects (Cinquini et al., 2019; Vanjari et al., 2011). Nationally, only 24.9% of adults aged 21 − 64 diagnosed with learning disabilities have a degree level qualification; a considerable disparity when compared to the able population (i.e., 42.7%; Office of National Statistics, 2022). Given that educational achievement is a modifiable risk factor for several life outcomes (e.g., health, Harshfield et al., 2021; life expectancy, Singh & Lee, 2021) this disparity is concerning. One specific group of individuals who are classed as having a learning disability are those with permanent memory issues; either developmental (e.g., dyslexia, Micciak & Fletcher, 2020 or acquired (e.g., brain injury, Fernandez et al., 2018 for more insight). Although the impact these learning disabilities have on academic outcomes has had considerable research attention, more research interest has been paid to permanent developmental memory related issues (e.g., dyslexia, Alghabban & Hendley, 2021).

In contrast, little is known about the academic experience of students with permanent acquired memory issues (SPAMRI). Further, the role that Covid-19 has played in disruptions to critical services is also elusive for this academic cohort (see Disabled Students UK, 2021; also, Basham et al., 2020). This leaves a significant gap within the research relating to the mainstream online learning experience of SPAMRI.

Online Learning Research

Online learning within the context of this study has been defined as “any educational intervention mediated electronically via the Internet” (Vaona et al., 2018, p. 1). To deciper the dynamics that promote academic success through online learning, some researchers have focused on motivation (e.g., Malinauskas & Pozeriene, 2020) whilst others have tried to unravel specific aspects such as student perceptions (e.g., Garip et al., 2020) and online engagement (OE) behaviour (e.g., Dahleaz et al., 2021). As a result, insightful findings that suggest online learning increases motivation (Harandi, 2015); and belief in one’s ability to complete tasks (i.e., self-efficacy, Bandura, 1982) influences online learning achievement outcomes (Peechapol et al., 2018) have been reported.

Although such research has been conducted through various designs (e.g., longitudinal, Fryer & Bovee, 2018; cross-sectional, Suhlmann et al., 2018; qualitative, Garip et al., 2020) and using different models (e.g., Self-determination theory [Deci & Ryan, 1985], Hsu et al., 2019; the Attention, relevance, confidence, and satisfaction model [Keller, 1987], Li & Moore, 2018) most of these studies are quantitative and cross-sectional. This methodological bias has resulted in generic ‘one-off’ findings that may also overlook confounding variables (Field, 2017).

The predominant use of heterogeneous populations without learning disabilities raises validity questions – as learning disability populations exhibit differential cognitive processes. For populations (such as SPAMRI), more time is needed cognitively to take in, comprehend, and respond to information (Trainin & Swanson, 2005; Fletcher et al., 2018). Therefore, it is reasonable to expect that their academic journey to be different. Although there are academic interventions addressing these differences (e.g., provision of disabled students’ allowance [DSA], Disability Rights UK, 2022) these are often not secured (Weale, 2022), which is a factor that may influence results across studies dedicated specifically to learning disability research.

Most research investigating online learning is dedicated to understanding adaptations and assistive technologies created to accommodate students with learning disabilities (Cinquini, et al., 2019). However, most of these studies pursue a generic understanding of a particular area of interest (e.g., procrastination, Niazov et al., 2022). This is understandable, given the heterogeneity of learning disability symptoms (Grigorenko et al., 2020). Yet, this reproduces a marginal approach that serves to limit understanding of minority populations (e.g., students with memory related issues) and potentially obscure aspects of the student experience. This limitation is strongly reflected in the extant research, as only one quantitative study that included SPAMRI, related issues (dedicated to online learning directly through a virtual learning environment) could be identified (i.e., Alamri & Tyler-Wood, 2017). Within the aforementioned study, a broad inclusion criterion for students with learning disabilities was used and SPAMRI was only a subsample. This research aporia suggests that the specific needs of SPAMRI, that could enable them to achieve positive academic outcomes are being overlooked (Disabled Students UK, 2021).

Aims Of The Present Study
The research presented above sets out a compelling rationale for the qualitative exploration of lived experiences of SPAMRI, without the restrictions of mainstream theoretical frameworks. Such an approach would enhance the extant literature in online learning by outlining a holistic perspective vital to our understanding of the needs of SPAMRI (Willig, 2021). Accordingly, this study seeks to explore the lived experience of such students to understand (i) what online learning means for them and (ii) what are the barriers and facilitators they face studying via online learning (during Covid 19). In so doing providing an informative base from which educators, psychologists, and policymakers can improve services for this population.

**Methods**

**Design**

The study used a qualitative Interpretative Phenomenological Analysis (IPA; Smith et al., 2009) design, utilising online semi-structured interviews that took place over Skype TM. Open-ended questions within semi-structured interviews are deemed well-suited to capturing evolving conversations (Flick, 2018). IPA's philosophical approach - a concern with deriving personal meaning and making sense of the lived experience - guided question development. The focus of this study was to gain in-depth insight into how SPAMRI gave meaning and made sense of their online experience. Upon this basis, the questions were created by using an iterative process (see Table 1 for the interview schedule).

<table>
<thead>
<tr>
<th>Questions selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can you please tell me why you chose to study your course online?</td>
</tr>
<tr>
<td>What does eLearning mean for you?</td>
</tr>
<tr>
<td>Have you experienced any eLearning challenges?</td>
</tr>
<tr>
<td>a: If yes - how have you dealt with these?</td>
</tr>
<tr>
<td>b: If no - why?</td>
</tr>
<tr>
<td>Have you experienced any facilitators within your eLearning journey?</td>
</tr>
<tr>
<td>a: If yes - could you describe the experience?</td>
</tr>
<tr>
<td>b: If no - what could facilitate you?</td>
</tr>
<tr>
<td>Are there factors outside of your e-mail platform that help or hinder you with your academic work?</td>
</tr>
<tr>
<td>How do you feel about using your eLearning environment?</td>
</tr>
<tr>
<td>Are there factors of your ear platform that you feel hinder or facilitate your capabilities?</td>
</tr>
</tbody>
</table>

**Ethical Considerations**

Approval to conduct this study was granted by the College Research Ethics Committee at the University of Derby. The study was carried out in adherence to the British Psychological Society (BPS) guidelines (2017, 2020). All participants gave informed consent, were debriefed and deception was not involved in this study. To protect the participants’ privacy, transcripts were anonymised by using pseudonyms, and participation remained confidential as only the interviewer knew their identities. All participants were made aware of their right to withdraw.

BPS (2020) guidance stipulated that during the Covid-19 pandemic all interviews must be conducted through online methods. This guidance was adhered to as the study took place in April 2021.

**Participants**

Participants were eligible if they were English-speaking adults aged between 18–60, be living with PAMRI, be enrolled in an online higher education course provided by a UK-based institution and have studied three modules for a minimum of a year. Individuals with a history of mental psychosis, or who had consumed alcohol or non-prescription drugs within 8 hours before the interview, were ineligible for participation in this study.

Six participants (3 male, 3 female) with PAMRI were recruited as members from Disabled Students UK. The age range for these participants was 38–56 years with a mean age of 44.8 years. Table 2 presents the full demographic characteristics of participants, with their pseudonyms.
Table 2

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Sex</th>
<th>Ethnicity</th>
<th>Course</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trey</td>
<td>38</td>
<td>Male</td>
<td>Black Caribbean</td>
<td>MA Education</td>
<td>2</td>
</tr>
<tr>
<td>Jayden</td>
<td>56</td>
<td>Male</td>
<td>Mixed Race</td>
<td>PG Dip in Forensic Psychology</td>
<td>2</td>
</tr>
<tr>
<td>Ben</td>
<td>42</td>
<td>Male</td>
<td>White</td>
<td>MSc Physiology</td>
<td>2</td>
</tr>
<tr>
<td>Kaye</td>
<td>48</td>
<td>Female</td>
<td>White</td>
<td>MSc Psychology</td>
<td>2</td>
</tr>
<tr>
<td>Stephanie</td>
<td>39</td>
<td>Female</td>
<td>White</td>
<td>MBA Project Management</td>
<td>2</td>
</tr>
<tr>
<td>Stacey</td>
<td>46</td>
<td>Female</td>
<td>Black Caribbean</td>
<td>MSc International Relations</td>
<td>2</td>
</tr>
</tbody>
</table>

Analysis

IPA (Smith & Osborn, 2008) was used for this study as it prioritises an in-depth examination of the lived experience (Smith et al., 2009). This is congruent with the aims of this study: i.e., to capture the online lived experience of SPAMRI. IPA allows for a phenomenon to be explored within its own right – i.e., free from the confines of being examined within predefined categories (Smith et al., 2009), thus allowing the phenomenon to develop naturally.

By allowing the phenomenon to naturally be revealed by each participant, the researcher aimed to ascertain a comprehensive understanding of SPAMRI shared online experience (Larkin et al., 2019). The researcher used an empathetic stance, that encouraged an “interchange of thoughts and feelings” both conscious and unconscious (i.e., intersubjectivity, Cooper-White, 2014) - to make participants feel at ease throughout the interview process.

The interviews were transcribed verbatim by the researcher, then each transcript was read and reread, to achieve familiarisation. During this process, the formation of the codes and ideas for coding were placed in the left margin. An example of this process is illustrated in Table 3.

Table 3

<table>
<thead>
<tr>
<th>Participant</th>
<th>Raw text from the transcript</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaye</td>
<td>&quot;... that little bit of extra support, of the lecturers... it reassures you and it makes you feel like... you’re not completely thick&quot;</td>
<td>Lecturer support valued - promoting self-belief</td>
</tr>
</tbody>
</table>

These codes were transformed into developed themes by arranging the codes into initial themes that were noted down in the right-hand margin. These were initially in chronological order and connections between them were established. This process led to the development of superordinate themes.

Throughout the process, themes were merged; these were reviewed against the transcript to ensure that true meaning was retained. At this point, the remaining themes - including the subordinate themes - were clustered and organised, and a table was created so that the higher-level themes could be seen clearly. A coding rule was developed for each major theme. Lastly, the themes were placed in a table, and an explanation of how the major themes were interrelated was specified (see Appendix).

Procedure

Individuals were recruited through “Disabled Students UK”. An invitation was placed with the inclusion criteria for the study on their members-only Facebook page. On this page, a link was provided to access a brief survey provided by Qualtrics that contained the Information sheet, and request for consent. The participants were then asked to fill in a brief Demographics and Participant Questionnaire and then they were permitted to book their interview dates from a selection of prospective appointments. From the information provided, a link was emailed to the participant that granted them access to the Skype platform for their prospective interviews. The interviews were conducted online between April 7th and 12th 2021 and lasted between 45 to 90 minutes. The average interview length was 65 minutes. All interviews were audio-recorded using Olympus Sonority and transcribed into Microsoft Word.

At the beginning of the interviews, participants were reminded that the interviews would be recorded, and verbal consent was re-ascertained. At the end of the interview, a full debriefing process was carried out.

Findings

The three overall themes that were developed from the analysis were: (i) Negotiating the challenges of online learning (ii) Learning and the emotional experience and (iii) Avoiding the gaps presented by online learning. These themes are interwoven and crucial to understanding the online learning experience of these participants. Table 4 provides an overview of these three themes and their respective sub-themes.

Table 4 Summary table of themes
Negotiating the Challenges of Online Learning

This theme encompasses institutional barriers (e.g., staff misunderstanding and unsecured DSA) and issues that students faced within their respective virtual learning environment (VLE), e.g., Blackboard, when studying online. Students felt the presence of these barriers placed them at a severe 'disadvantage' that limited their achievement outcomes.

Inadequate understanding of PAMRI by institutional staff led to needs not being fulfilled. Across the interviews, non-receipt of DSA was discussed for these participants, which meant that access to important resources and support services (e.g., mentoring and study skills support) needed were not obtained. Their desire to produce good work was effectively compromised. For most, the procedural requirements to obtain DSA (e.g., remembering the service or providing evidence) was cumbersome:

...my disability being one of memory... trying to apply for...support...has been a big issue...the lady sent me...the DSA form...I'm now at the end of the course and have not filled the form out... Unless something jogs my memory, I'll just keep forgetting. I explained this to them, to ask for help... they listened, but just didn't understand what I was saying. (Stephanie)

“I don't think that support is there...it wasn't offered to me...there was none of that present for me...I don't know...” (Ben).

Delay in receipt of DSA reduced work rate, leading to a backlog of work, adding time pressure to complete assignments. Pursuing DSA presented a time trade-off with impending assessments, compounded by the fact that higher education institutions were running a skeleton service due to Covid-19 restrictions:

...at the beginning...I was supposed...to get a computer that would...help... it's... been over a year... and I know this is Covid, but I still have not received this laptop... I think that probably it may have helped me in some way...it has been... more difficult than I thought. I was behind everybody... swamped... not having support... that I believed I would have got with my disability was problematic. (Jayden)

“I didn't really have time to chase things... I had to put my energies into my course” (Ben).

Crucial support was not secured. Additionally (in all accounts except Trey's), inconsistency in support created uncertainty from one semester to the next. This meant strategies were thwarted by changes outside of their control; making learning more challenging:

“I've tried to write down the pathways...to follow the steps...it doesn't always work...the platform sometimes changes” (Jayden).

“... why would you be able to email one lecturer with...unit activities and get feedback but...not somebody else... you don't know what level of support to expect” (Kaye).

These unexpected changes meant they perceived support as unstable and were unable to gauge levels of support and achievement outcomes correctly.

Further, the perceived usability of their VLEs was especially influential on how online learning was experienced. Participants reported problems with poor usability, which presented critical challenges as it created confusion and conflict with self-efficacy. Online learning meant that their attentive process was substantially split between the process of interacting with their platform and completing their respective tasks. As one participant put it, "It was like I was doing two courses in one at some points" (Kaye).

For these participants, the most significant usability issue was navigation. Stacey explains her experience "There was no signposting as to where I had been and there was no way to keep track of it..." (Stacey).

All the participants expressed similar navigational issues that created barriers to learning. As one participant explained: "...knowing where, how to navigate... where to find information, what sections to click ... could be... a challenge...just trying to remember...so much information to take in...I just couldn't... remember...am very forgetful" (Trey). The inability to process this information (i.e., cognitive overload) had serious implications for the effective use of their time. As one participant detailed: "... time was going. The more I used the...platform was the more... I didn't want to use it" (Ben). In addition to being a source of demotivation, he further indicated that using his EP came at considerable expense to self and created a sense of imprisonment:

“I felt that I couldn't move...because I'd forget ...what I was doing and if I moved or got distracted...it would mean I'd forget where I was” (Ben).

For one participant the cognitive overload was so profound that breaks had to be taken for him to determine where he needed to be. He said:
...am not sure how much of it has to do with my disability or... the platform itself... I don't know where to go even though there's tabs that would probably have a clear link... there are so much more other tabs and information... the tabs... I need are... in front of me, but I can't see... I have to take a break... come back... then I might... find it. (Jayden)

In sum, this theme illustrates how institutional barriers negatively impacted their online experience. In addition, poor perceived usability (PPU) of their VLE hindered the development of self-efficacy, thwarted motivational processes, and restricted their achievement outcomes.

**Online Learning and the Emotional Experience**

This theme relates to emotional aspects of their online learning experience; their responses, perceptions, and desires. All six participants gave accounts of emotional challenges (e.g., anguish, and isolation) encountered because of online learning. Participants desired to be good and engaged students; however, they expressed that being a student with a PAMRI and having to navigate online learning spaces with inappropriate signposting made achieving this goal more unobtainable; as a result, participants reported negative affect:

"I can't remember where to go, I get upset with myself" (Kaye).

"I have feelings of complete anguish regarding the use of the e-learning platform" (Ben).

Further, these negative affective responses disrupted motivational processes; resulting in less OE, lower achievement, and attenuated feelings of self-efficacy. Jayden explained that "it becomes harder to motivate myself... with it. I just stop using it... it gets too much..." This fostered feelings of potential failure (Kaye, Stephanie Stacey, Ben, Jayden) and consideration of course termination (all except Ben). This represented a potential termination ratio of 4 out of 6. The impact of PPU on their experience was reflected within their accounts:

"I was constantly missing things... not producing good quality work... I can see... how this has had an impact on my... grades... mere passes and a fail... I've thought about leaving... I'm struggling constantly" (Kaye).

"I couldn't get to the end of my assignment and... thoughts of not engaging with it or dropping out did cross my mind" (Stephanie).

Participants shared feelings of self-consciousness about their PAMRI: shame and fear of how others within their VLE would perceive them. Posting on discussion boards was particularly problematic; not only due to poor usability, but also concern that their communication would expose their PAMRI:

There was a discussion board where you could socialise with other students... there were also weekly tutorials... I missed all of it... I just couldn't understand how to get there... how to interact... I wasn't sure who would see what... I didn't post anything at all. (Jayden)

"I'm not about to put all my mistakes and let... how many people realise that there's something wrong, the whole thing is... not the way for it to be done... this I find problematic" (Ben).

"...finding where I needed to be... was problematic and the posting... to participate for all to see, my disabilities, was frightening... I don't feel comfortable... exposing my vulnerabilities I... I just prefer not to participate this way" (Stacey).

Thus, the 'double whammy' of navigating life as a SPAMRI is identifiable in the interviews. This impacted on their self-perceptions and student identity – i.e., feeling unable to be the kind of students they aspired to be and even contemplating dropping out. To illustrate this, participant Stephanie expressed that: "...the anxiety... caused by the system was unsurmountable... It just was not working for me. I couldn't get to the end of my assignment... I would say thoughts of not engaging with it or dropping out did cross my mind... fear was breaking me." This quote clearly demonstrates the emotional experience of online learning generated by the challenges faced. The quote also captures the participants' frustrations and the significant emotional distress experienced.

Covid-19 restrictions complicated the emotional impact: making effective strategies inoperable; removing the possibility of peer support through social gathering and interfering with access to online learning support services. A sense of institutional belongingness was eroded, giving rise to feelings of isolation and lack of support:

"... you're... you're quite insular... alone... you might not particularly understand something... but just to sit-down work together... just having that extra support... that... would have helped me" (Trey).

"... things felt totally out of my hands... I had to get help so... I didn't flunk out... I reached out for... anything that would get me through... I was desperate... willing to put in a severe amount of... overtime... but I needed a break..." (Ben).

"... the platform wasn't able to cater to my needs" (Stacey).

The identified double whammy impacted on the mental well-being of participants, instigating severe mental health issues for two participants (the spectrum, type, and gravity of which varied in participant accounts):

"I'm a bit frustrated with it... that affects my motivation... that will bring on a bit of anxiety and depression... it is all connected." (Jayden).

The eLearning platform has just been, not a great experience... I think Covid did exasperate things that much... more I was already in a state of turmoil... because navigating... was a horrible ordeal. It wasn't a joyful experience... it was... a source of depression. (Ben)
In summary, this theme depicts various negative affective responses participants experienced as online learners - including being physically separated from people (e.g., family and student peers) during Covid lockdowns. This manifested in challenges to well-being that had different consequences for these participants. Despite their different accounts of difficult emotional experiences, aspects such as secured support and coping strategies played a facilitative role throughout their academic journey.

**Avoiding the Gaps Presented by Online Learning**

This theme relates to participants' experiences of support (e.g., academic, peers and family) and use of strategies (e.g., academic, and emotional coping) that helped them to overcome challenges faced whilst studying online. Most of the participants gave accounts of securing institutional support (e.g., lecturers and advisors) or support from informal sources (e.g., family and peers). Support received from lecturers helped with perceptions of self-belief - enhancing their desire for academic success - despite the barriers they encountered:

"...couple of lecturers...go...out the way to help you a little bit more...they recognised that you need...additional support...It reassured me, it makes you feel like...you're not completely thick" (Kaye).

I was very fortunate...one lecturer...had my back, he was very considerate and seemed to understand all that I was going through. The...system...it just was not working for me...I had thoughts of not engaging with it or dropping out. (Stephanie)

Lecturers played a vital role in enhancing their learning experiences and relatedness - especially when they communicated outside of the VLE.

"...one teacher...he supported me...that I didn't have to interact on the board...I could use him as a sounding board for ideas...it was nice just to have that person to liaise with...it was...straightforward for me to email" (Stacey).

Another valuable avenue of support secured came from informal sources. Informal support assisted with emotional coping, motivation, and strategic benefit. Like institutional support, informal support played a crucial role in perceiving their course as manageable and fostered a sense of belonging, which helped to mitigate thoughts of dropping out:

"...friends and family have been helpful...just a...bit of support...saying don't give up...stick with it...they help motivate me and keep me on track...I've wanted to just give up and stop at times" (Jayden).

"My husband pitched in...I can get in a tizz...he suggested getting a private tutor" (Stacey).

"...the student WhatsApp group...helped me...we can drop links into the group when we're feeling isolated, we can say because we all are going through similar thing" (Ben).

Despite initial motivations such as "a better life" and "job prospects" (outlined by Trey but echoed by all the participants), the ongoing reality of what was required to achieve this goal eroded this motivation as they had thoughts of dropping out. However, support secured acted as a psychological buffer for these participants, complemented by the effectiveness of strategies that they chose to implement.

However, Covid restrictions meant crucial access to libraries and other external support resources (e.g., hard copy textbooks) were inaccessible. Most participants realised that they had to implement additional facilitative strategies to compensate for the challenges of Covid and PPU, but for most these held financial repercussions.

"...hard texts...better for my way of learning...the library and the student support centre were not open...I had to drop a unit to make the load more manageable... The...thing became a nightmare...rough for me...I had to purchase some...couldn't get them all...they were expensive." (Stacey)

"...I paid for tutors...that looked at this...area I wasn't really in the financial position...but it had to be done" (Ben).

"...getting a private tutor...was an added expense it helped me...It cut out...dealing with the platform to a minimum" (Stephanie).

For these participants, the use of additional resources and conscious disengagement from their VLE meant taking control of their achievement outcomes - most specifically their assessments:

"I had to...compromise...The best thing to do would be to complete the assignment...focus on that..." (Stephanie).

"Sometimes...the...platform changes that...did not help...I would just download the assignment...email the teacher and...by having a clear picture as to what they wanted I didn't engage on blackboard" (Stacey).

Emailing proved to be a simpler, more efficient way of submitting tasks - and communicating with their lecturers - than using their VLE. Further, these participants perceived disengagement from their platform as both an academic and emotional coping strategy, that freed up time to focus on their assessment.

Collectively, the examples within this theme reflect the meaning these participants placed in secured support and effective strategies within their online learning experience. These helped to meet both psychological and academic needs not generated solely from VLE interaction (providing autonomy, aiding self-efficacy, and promoting belongingness).

**Discussion**
This study explored what online learning meant for a sample of mature SPAMRI and the eventualities that influenced their academic progression. Overall, academic staff were supportive but, at times, misunderstanding of students’ needs, which reportedly shaped an online experience characterised by substantial disempowerment and challenges (i.e., emotional, and academic) for the participants of the present study. Support and individualised strategies served to allay thoughts of drop-out and to preserve mental well-being across their online learning experience.

The analysis revealed how participants’ needs were misunderstood by members of staff (e.g., lecturers and DSA administrators) and how this misunderstanding permeated their online experience from the outset. This finding is consistent with other studies based on learning disabilities and implies that universities should improve staff awareness regarding the needs of PAMRI (e.g., staff perceptions, Hansen & Dawson, 2020; DSA procedure, Rice & Dykman, 2018).

Further, participants being misunderstood by staff left them to take full ownership of securing DSA - irrespective of disclosures made to Universities’ staff about their PAMRI. Paradoxically, participants who needed DSA due to memory issues were being asked to remember numerous factors to secure this valuable support. All participants failed to receive DSA. This supports current evidence (Rice & Dykman, 2018; Weale, 2022) and indicates there are gaps in understanding of how best to provide a suitable service for SPAMRI within an online setting.

While this study supports findings from broader learning disabilities’ research that security of accommodations - e.g., assistive technology - is a cumbersome process (invisible learning disabilities, Mullins & Preyde, 2013), it also presents novel findings that may be specific to SPAMRI. In particular, misunderstandings meant participants experienced educational disempowerment and became lost within the academic system.

In the absence of DSA, participants perceived the usability of their VLEs as poor. This generated both negative affective responses and cognitive overload. This connects this study’s themes of ‘Negotiating the challenges of online learning’ and ‘Online learning and the emotional experience’ with the untested Frustration - pride model (Juutineen & Saariluoma, 2010).

This model suggests that failures (e.g., cognitive overload) and negative affective responses can form part of a negative cycle that includes withdrawal behaviour (e.g., reduced online engagement), within online learning. As this model has remained untested, the process through which it works remains unknown (Juutineen & Saariluoma, 2010). However, as all participants but one voiced reducing OE, this study supports the negative affective predictions within this model. Therefore, this finding suggests that online learning through their VLEs was not a motivational experience (despite research that suggests the contrary: e.g., El-Seoud et al., 2016; Harandi, 2015).

Overall, this study’s findings provide conflicting evidence to research concerning reduced online engagement, as this behaviour included within their strategies generated several positive outcomes (e.g., bolstering self-efficacy). Therefore, reduced online engagement appeared to contribute to motivational processes for these participants; conflicting with the Frustration-pride model (Juutineen & Saariluoma, 2010) and past research (Elsheiref & Mohamed, 2021) based upon quantitative analysis. In contrast, reduced online engagement formed part of a positive cycle for these students. For them, working outside of their VLE fostered feelings of (time-related) autonomy competency, and belongingness as they could work more effectively. This is a unique finding that falls in line with Self-determination theory (Deci & Ryan, 1985); which connects to the remaining theme ‘Avoiding the gaps in online learning’.

Self-determination theory (Deci & Ryan, 1985) suggests people become motivated when three basic psychological needs (i.e., competence, relatedness, and autonomy) are fulfilled. The participants’ use of individualised strategies (e.g., hiring a private tutor) interlinked with support (e.g., lecturer support) gave them a perceived sense of control - particularly during Covid 19. Further, support and strategies afforded them an effective means of achieving desired outcomes: fostering self-efficacy (i.e., competency) and belongingness (i.e., relatedness). This suggests that both individualised strategies and support secured can play a crucial facilitative role in motivation whilst also aiding wellbeing and course perseverance (e.g., strategies, Firat & Bildiren, 2020).

Future research needs to focus on qualitative or mixed-method studies based specifically on SPAMRI populations, to ensure that unconsidered aspects unique to this population are better understood (e.g., PAMRI and the DSA process). However, caution should be used in the interpretation of these findings, as it is unknown how other factors (e.g., maturity, life experience) may have influenced perceptions of their academic experience. Also, given the small homogeneous sample involved, and the fact that the spectrum of participants’ PAMRIs were varied, the generalisability of this study is restricted.

**Researcher Reflexivity**

My interest in this subject developed from being a student studying with PAMRI. My standpoint regarding PAMRI is that society does not comprehend the needs of these individuals or grasp that distinct difference per se, does not equate to "being deficient". As a researcher, I acknowledge that my experience and preconceptions as a student with PAMRI may have influenced the interview questions created – creating a double hermeneutic within this study, given that the participants were also mature students with PAMRI like myself. Nevertheless, every reasonable attempt was made to bracket and recognise my preconceptions.

**Conclusion**

The findings within this study have far-reaching implications for university policies and practices. The findings highlight a need for universities to revisit existing procedures and policies to better meet the needs of SPAMRI by ensuring (i) that their VLE providers have considered this population within the design process and (ii) that SPAMRI are not lost within the DSA process. This could prevent disempowerment, emotional anguish, and drop-out among the SPAMRI cohort. This study - emphasises that specialised conceptualisation and sensitive research are needed to prevent the further marginalisation of SPAMRI and promote student inclusivity.
Declarations

Conflict of Interest:

The authors declare that they have no conflict of interest.

References


Appendix

The Appendix is not available with this version