"I've built a shield around myself, I'll finish and that's it": Coping strategies among online students with disabilities

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Online learning offers learners the convenience and freedom to study at their own pace and place, but it also poses various obstacles for those with specific educational needs. This paper aims to delve into the subjective experiences of online learners with disabilities, focusing on how they manage the challenges encountered in asynchronous online learning. Reflexive thematic analysis was used to analyse interviews conducted with 24 learners with physical, sensory, mental, and learning disabilities. The analysis showed that learners employ proactive coping strategies to address academic and emotional challenges, as well as critical life events, hindering their full involvement in online learning activities. Internal factors such as self-determination, self-efficacy, resilience, and problem-solving play a significant role in overcoming the difficulties associated with online study. This research provides valuable insights from learners' perspectives that can inform the development of more effective support strategies for all students. Cultivating awareness of diversity and providing training to students on building self-belief, self-care, and problem-solving skills are highlighted as key elements for enhancing their persistence and academic success. By taking into account the experiences and needs of students with disabilities, educational stakeholders can develop tailored strategies that foster an inclusive and empowering educational experience for all.

Keywords: coping strategies; learners with disabilities; online higher education; inclusive education; academic success; students' perceptions

Introduction

There are different models of online learning in higher education, with synchronous and asynchronous methods representing fundamental distinctions (Giesbers et al. 2014). Synchronous online learning involves real-time interactions, so learners have to follow on-demand lectures in a very rigid schedule. Whereas asynchronous learning allows learners to access content at their own pace. Interaction occurs via text-based communication and prerecorded videos, without simultaneous professor-learner alignment.

Asynchronous online learning is highly appropriate for learners with disabilities as they find it flexible, accessible, and convenient (Burgstahler 2022), but it also gives rise to some challenges for them (Verdinelli and Kutner 2016; Kotera et al. 2021). This group of learners encompasses persons who live with a diverse range of conditions, including physical and sensory impairments, chronic illnesses, as well as mental, developmental, cognitive, and learning disorders (Kent 2015). This population presents significant heterogeneity, necessitating accessibility measures in the learning environments, as well as suitable learning resources and support for instructional, technological, and emotional issues (Reyes, Meneses, and Melián 2022).

Several studies have focused on describing the main difficulties these learners deal with when taking asynchronous online courses. One of the major problems is their invisibilisation, an issue also common in other learning environments (Kimball et al. 2016; Moriña 2017). When learners with disabilities enter higher education institutions, they usually clash with curricular, technical, administrative, and social barriers due to the educational models and systems predominantly designed with homogeneous student

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profiles in mind.

The inclusion of learners with disabilities in online learning is usually hindered by accessibility issues and social isolation, which cause psycho-emotional instability (Reyes, Meneses, and Xavier 2022; Murphy, Malenczak, and Ghajar 2019; Kotera et al. 2021). Given that online learning eliminates architectural barriers per se —one less problem to deal with— accessibility barriers focus on curricular and administrative processes. For instance, these learners, especially those with learning and sensory disabilities, find many barriers to accessing learning contents and resources, as well as to bureaucratic procedures (Reyes, Meneses, and Melián 2022). Accessibility issues and social isolation trigger socio-emotional and psychological challenges such as loneliness, academic distress, stress, anxiety, frustration, and lower self-esteem that directly affect learners' academic performance (Kent 2015; Murphy, Malenczak, and Ghajar 2019). Given these challenges, learners resort to their skills to overcome adversities, meaning they have to overcome these barriers to successfully continue their studies.

The literature on students' coping strategies often focuses on managing stressful feelings derived from academic issues, including how they deal with critical life events or conditions (Shenaar-Golan et al. 2020). Coping is a multidimensional and multifunctional construct that Lazarus and Folkman (1984) define as the cognitive and behavioural efforts that individuals make to manage a particular demand. Learners with disabilities use various coping strategies to overcome adverse situations derived from the learning environment, personal circumstances, and life events. According to the previous literature, these students highlight aspects like the beliefs in oneself, effort, self-advocacy, self-care, and problem-solving skills as the most critical to cope with

issues associated with pursuing a university degree (Sharabi, Sade, and Margalit 2016; Miller et al. 2019; Kisanga 2022).

For instance, factors such as self-efficacy and self-esteem along with optimism, hope, and a sense of coherence positively influence learners with disabilities' success and persistence in higher education (Vaccaro et al. 2019; Sharabi, Sade, and Margalit 2016). The general effort also constitutes a salient factor that leads learners with disabilities to overcome many issues resulting from their academic activity. These students emphasise their sense of self-determination and perseverance to carry out the learning tasks (Wilke et al. 2023). Indeed, they prefer to intensify their efforts instead of seeking institutional support, aiming to avoid any differential treatment (Melián and Meneses 2022; Miller et al. 2019) and showcase their commitment to overcoming criticism regarding accommodations and supports (Terras, Leggio, and Phillips 2015; Singleton et al. 2019).

Even though many learners with disabilities prefer not to disclose their condition (Bell et al. 2017), those who do so usually develop self-advocacy skills that enable them to access accommodations and supports, which contributes to their academic performance, persistence, and success (Kimball et al. 2016; Orr, Brillante, and Weekley 2022). However, this is controversial because access to this type of support is exclusive to the ones who are willing to disclose their condition or actively advocate for their rights. Apart from self-advocacy, some researchers have observed behaviours of self-care to cope with adversities among these learners. For instance, Vaccaro et al. (2019) found that positive thinking and self-talk, maintaining a positive mindset, and having a positive attitude toward their disability helped students to successfully handle some emotional challenges experienced in higher education.

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People with disabilities usually develop problem-solving skills to overcome the adversities they find in their lives. This proactive stance prompts them to seek external resources to solve certain difficulties. For instance, learners with disabilities seek social support coming from their families and the people who they live with to solve some problematic situations resulting from academic activities (Chadwick 2022; Vaccaro et al. 2019). Moreover, higher education institutions often make accommodations in their programs of study, infrastructure, and curriculum in order to support learners with special educational needs. While it is true that accommodations may be seen as controversial, students who access them consider this type of support as very useful to overcome academic barriers (Bell et al. 2017; Chadwick 2022). Studies conducted on coping strategies among online learners with disabilities have primarily centred on describing relationships among variables such as isolation, beliefs in oneself, and social and academic supports in synchronous learning environments (Laslo-Roth, Bareket-Bojmel, and Margalit 2022). Therefore, there is a need for a study that explores learners' experiences in overcoming challenges specific to asynchronous online learning, in order to complement the existing literature.

The present study

This study provides a better understanding on how learners with disabilities overcome the common challenges experienced in asynchronous online learning by raising their voices. Reyes, Meneses, and Melian (2022) observed that the existing literature mainly focuses on the challenges faced by these learners, the measures taken by universities to address them through accommodations, and the importance of adopting universal design for learning principles as a means to prevent such difficulties.

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However, we have limited knowledge on how learners with disabilities navigate online learning challenges in situations where they choose not to disclose their condition, encounter difficulties in receiving institutional support, or available accommodations prove insufficient to address their individual needs. Therefore, given the rapid growth of online learning and considering the nature of challenges it may cause to these learners, this study provides comprehensive insights into how they overcome social, curricular, technological, and psycho-emotional barriers. The following research question guided the analytical process:

How do learners with disabilities cope with asynchronous online learning challenges?

The investigation has been conducted in a Spanish university based on asynchronous online learning. According to Fundación Universia (2023), more than 22,000 learners have a recognised disability in Spanish universities, of which almost 50% are online students. In line with the United Nations Sustainable Development Goal 4 and the European Agenda 2030 strategies, Spain encourages institutions to offer universal access and equal opportunities across all educational levels, as a means of fostering inclusive education (Law 6/2022, March 31st, Modification of the Consolidated Text of the General Law on the Rights of Persons with Disabilities and Their Social Inclusion 2022).

The researched university is grounded on open online learning since its inception and proposes a student-based educational model. Learners in this university have a non-traditional profile, including those who combine study with family and job responsibilities, aged between 25 and 60 (or older) years, and belonging to underrepresented communities (women, first-generation students, and people with disabilities). Out of the 87,000 students enrolled in this institution, 2,346 have a

recognised disability, making it the second Spanish university with the highest number of such students (Fundación Universia 2023). Given the nature of the university's educational model, learning takes place anywhere and anytime, often assembled through competency-based activities carried out throughout the period of study. As the activity takes place asynchronously, learners communicate with any university's stakeholder primarily via text-based interactions and through the virtual learning environment including Google Workspace.

Several faculty and administrative figures organise the work with students to accompany them in their learning and academic activities: academic advisors, student services, and professors. All learners have the support of an academic advisor who accompanies them in adapting to the educational model and guides them through any academic and administrative procedure. Student services provide technical support to solve any issues related to accessing the virtual campus, teaching, and assessment activities. Finally, professors support learners with their learning, providing personalised text-based feedback. All students have the learning materials digitised in multimodal formats. Additionally, the university offers accommodations in teaching and assessment for learners with recognised disabilities. These actions consist in extended time for exams and assessment activities, provision of accessible materials as necessary, overlooking grammar and spelling mistakes for students with learning disabilities, and differentiated activities in exceptional cases.

Methodology

This is a qualitative investigation based on an intrinsic case study (Yin 2012). This research design is suitable for the study, so it enabled us to focus on the intersections

between the features of a particular learning environment and the involvement of an underrepresented group of learners. By adopting an essentialist approach in framing the analytical process (Braun and Clarke, 2022), the study emphasises knowledge construction from participants' perceptions as expressed in their testimonies. The combination of the research design and an essentialist perspective allows for a comprehensive exploration of how learners from a disadvantaged group navigate the online learning environment.

Participants

After the research project was approved by the University's Ethical committee, we invited all learners with disabilities to participate in the study through the Help Service Office. We receive 101 responses, of which we chose 24, taking into account the type of disability learners deal with (physical (n=6), sensory (n=6), mental (n=6), and learning (n=6)) and the stage of study they were in (first-year (n=8), intermediate (n=8), and senior students (n=8)). The selection criteria encompassed four groups of disabilities, including physical (mobility impairment and chronic illnesses), sensory (visual, hearing, and speech impairments) mental (behavioural, emotional, and regulation disorders), and learning (learning difficulties and neurodevelopmental disorders). Regarding learners' academic progress, first year students had completed up to 60 credits, intermediate students up to 180, and senior students more than 180 or were pursuing a master's degree after completing their bachelor's degree at the same institution. Initially, those interested informed us about their fit based on these profiles and then we chose those who met the criteria until we reached the expected number of participants. Interviewing learners from different profiles enabled us to capture diverse experiences and

perspectives on studying online. Table 1 displays more information on participants' demographics. All respondents signed an informed consent through which we let them know the objectives of the study, their rights, what their participation entailed, and how their data was going to be used. Participants' names have been changed to pseudonyms to protect their anonymity and confidentiality.

Table 1 (it will count as 281 towards the total of 7000 words). [Near here]

Data generation and analysis

Data was generated through semi-structured interviews. The interview protocol included three themes: learners' expectations of online learning, experiences as online learners, and support. Participants were asked about their decision to choose online learning and their expectations, the main challenges experienced as online learners and how they surpassed such difficulties, the advantages perceived, and the support received either from family, peers, or institutional stakeholders. To guarantee accessibility and comfort, interviewees could choose between videoconferencing and email. Online interviews are particularly advantageous when engaging with hard-to-reach groups such as those with disabilities (Cook 2012). For instance, email interviews enable people from marginalised communities to convey their experiences more comfortably and clearly than by face-to-face meetings (Benford and Standen 2011). Videoconferences lasted from 45 to 70 minutes with an average of 55 minutes, were recorded under participants' consent, and transcribed verbatim later. Six participants chose email interviews, responding to questions organised by themes, with each email typically containing between 5 and 7 questions. They were requested to provide additional information through follow-up inquiries within a period of one to three working days.

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We used Reflexive Thematic Analysis (Braun and Clarke 2006; Braun, Clarke, and Rance 2015) to inductively code and analyse the voices of our respondents within an experiential orientation focused on reflecting 'participants' contextually situated realities' (Braun and Clarke, 2022, p. 8). Our intention was to capture the perceptions, assumptions, behaviours, and practices embedded in their discourse. To do so, authors reviewed, codified, and grouped the information based on research questions in an iterative process, which included several meetings aiming at discussing interpretations and finally arriving the themes that significantly explain respondents' experiences.

Results

Learners with disabilities' inclusion in online learning is hampered by academic and emotional-based challenges. Catalysts of these difficulties vary among curricular, psychological, social, and technical issues, in addition to critical events resulting from other sources that influence their involvement. Beyond describing the barriers these learners encounter while undertaking online studies, we analyse the way they deal with such difficulties to persist in their studies and successfully achieve their academic goals.

Dealing with academic challenges

Academic-related difficulties experienced by our respondents come from the learning environment, although sometimes they assume that disability or medications influence their performance. Three main challenges hamper learners' full involvement in learning activities: social, time, and accessibility barriers. Regardless of the type of disability and the stage in which learners are, these challenges consistently appear in their testimonies, although the experiences vary according to the condition with which they live.

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Social issues are largely rooted in a lack of understanding from teaching and administrative staff and peers. As is common in other learning environments, our participants often rely on institutional support to sort out pedagogical or technical issues, but those with learning difficulties, mental health conditions, or chronic illnesses usually perceive negative attitudes from professors and administrative staff. For instance, Marina explained 'When one informs them [about your needs], it's like they hold a bit of a grudge against you because it seems like you're asking for things that aren't appropriate; as if you're taking advantage of the situation.' Participants cultivate self-regulation skills to ignore such attitudes, so they "embrace patience" (Robert) and "self-motivate" (Michel). In this study, proactivity is a remarkable characteristic of these learners. Disclosing their situation is a resource they go to, but negative attitudes from professors dissuade them from seeking feedback and institutional support: 'I told a professor that I was completely stuck with an assignment, but she said this was my own problem… many times, I've had to rely more on external materials (books, classmates' summaries…) to pass my courses' (Monika). Counting on advisors' support and mediation becomes useful when facing these difficulties, even though such a strategy does not always end up solving the problem. Participants also perceive negative attitudes among peers, which makes it hard for them to participate in collaborative learning activities, so they attempt to evade courses based on teamwork methodologies.

Our respondents expressed their concerns with curricular accessibility, especially regarding learning contents and assessment activities. These learners often rely on their own resources to surpass any barrier, fostering a strong sense of problem-solving, self-determination, and perseverance. This self-reliance is not only a testament

to their resilience but also a necessity due to the nature of online asynchronous learning, where human-based support is not immediate. The use of assistive technologies, open educational resources, and other types of technologies –depending on the type of disability– is the first option given that relying on someone else is not that comfortable for them. Participants with learning and sensory disabilities seem to have more resources to navigate against adversities. 'I take a little longer to perform all the daily actions of life, so I already know, more or less, the time it takes me to complete a [learning or evaluation] activity. Consequently, I organize myself taking this situation into account' (Ivan). These learners turn to proactivity by seeking support from the people around them when facing difficulties accessing learning materials. For instance, participants expressed that they turn to their family, friends, co-workers, and organisations for people with disabilities, or pay for the services of professionals when having trouble.

Interviewees face additional challenges such as time-scarcity and cognitive issues depending on the type and severity of disability, so they have to struggle with pain, mental issues, and medications effects. But they have their academic goals clear, which increases their self-efficacy, self-determination, and resilience: 'I've built a shield around myself, it's up to me and I'm going to handle it' (Vera). As finishing their studies involves dealing with an assortment of obstacles, these learners use specific strategies to do so. For instance, as they gain experience as online learners, they become more adept at managing time, pace, and place of study ('I have a daily planning' (Andy)), as well as at using study techniques and reading comprehension strategies. 'I use an application that helps me concentrate a little more; it involves 25 minutes of

study and 5 minutes of break' (Elena). Time management differs according to the type and severity of disability. In this investigation, participants with learning difficulties and ADHD follow the motto 'Don't put off till tomorrow what you can do today' (Monika). Those with severe mental, sensory, and physical disabilities adapt the pace or work according to their physical and emotional state, while others with mild physical and sensory disabilities prefer to engage in marathon sessions based on deadlines.

Dealing with emotional challenges

Pursuing a degree may cause a wide range of emotional challenges such as stress, anxiety, frustration, or distress to all learners. Our participants, therefore, are not far from this reality. So, they often deal with stress, anxiety, and frustration derived from their academic activities, coupled with the typical loneliness resulting from studying online and, what is more, asynchronously. Living with a disability sometimes make these challenges greater. In this regard, participants consider administrative procedures, content accessibility, assessment activities, and social interaction as the main sources of psycho-emotional issues.

Participants make use of their own resources whenever possible. For instance, they turn to strategies such as defining goals and routines, disconnecting from stressors, and positive thinking to overcome emotional issues. These strategies often vary according to the type of disability. Learners with mental and learning disabilities are more willing to establish routines, making planning, or defining goals, which is really useful for them, as Christine conveyed:

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I take advantage of the mornings to engage in physical-based activities such as shopping, cleaning, and going out. This way, I can dedicate myself to studying in the afternoons when I am less active due to depressive episodes. I have internalised this routine, making it much easier for me to carry on.

Our participants with physical and sensory disabilities and chronic illnesses organise themselves following their circumstances, trying to have a positive mindset on their condition. When feeling overwhelmed, these learners often lower the workload by enrolling in fewer courses or postponing them for the coming semesters and even, when the situation is that hard, they stop-up their studies until feeling better.

In this study, learners with disabilities seem to focus more on their self-improvement than competing or pursuing career objectives, which inspires them to persist and stay self-motivated when facing adversities. Among other expressions, they often utilise phrases like 'I want to have fun and fulfil myself' (Andy), 'I want to feel useful' (Rosa), 'I like it, I have fun; It's for personal fulfilment' (Paul), when describing their motivation to study. Nonetheless, these learners also seek companionship to get motivation and inspiration. Building and engaging in relationships is one of the mechanisms they use to get moral and instrumental support, and their assessment of these relationships is highly positive. 'My family and peers always make me feel supported. I often think about giving up, having a break, and lessening the crises, but they persuade me to rest and approach the next day with a fresh perspective' (Andrea). Sometimes, when the situation becomes harder, learners seek support from professionals, meaning they get assistance or medications to cope with strong psycho-emotional issues.

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Dealing with critical moments and life events

Apart from academic difficulties and emotional challenges resulting from learning activities, our participants have to cope with critical moments and life events. Interviewees have experienced issues that make it difficult to persist in their studies. For instance, learners who have recently acquired or been diagnosed with their condition find it troubling to accept the changes it entails. Even though each one experiences it differently, these circumstances influence learners' full involvement in the learning process. In some cases, it entails relief: 'I even cried when I got the diagnosis. It was like "Please, tell me what I have. If not, I won't know what's happening"' (Marina). Whereas other times it entails a drastic change that makes it difficult to manage. Sara had a loss of 99% in her right ear while studying online:

> Since I became deaf, it took me two years to process the disability, why? Firstly, you don't accept it, you don't know what's happening, you feel disoriented and blocked... Then I started accepting it and saying 'Well, it has come to stay and there's no turning back, so try to make the best of it'.

Participants also experienced critical moments outside of disability that impacted their academic performance. Online learners deal with significant hardships, whether at the beginning or in the middle of the academic trajectory. They usually enter online higher education with unrealistic expectations about studying online. Consequently, they find it hard during their first days given the difficulties of completing bureaucratic procedures and learning tasks without anyone to ask for help immediately. Even though an advisor supports all learners asynchronously via the online forum or email in this university, at the beginning it is often difficult for

everyone to discern the available options of support and the stakeholders' roles. Respondents also lived dramatic moments in the middle of the academic trajectory. Paul conveyed: 'There are moments when one says, "Look, mate, I'm done with it, I'm giving up because I can't take it anymore". But I've received support that's been very positive… I'm eternally grateful.' Indeed, these learners have true grit, which boosts them to surpass adversities, coupled with the moral and instrumental support received from their family and the institution.

Learners in this investigation had to reconcile other responsibilities with their studies such as taking care of their relatives (parents, partners, or small children) and dealing with job challenges. Participants also coped with Covid-19, which brought the loss of family members and friends, emotional and health issues, and lockdowns. However, given their grit, perseverance, and self-regulation skills, they managed such adversities and continued with their online studies. Sometimes, studying online is a way of coping with life adversities. For instance, learners with severe physical and mental disabilities deem it as an option for their well-being. Christine conveyed:

> I was about to die, hospitalised for two and a half months; when I recovered, I decided to enjoy life more and do what I felt like doing. The disability made me choose the degree I'm pursuing, and well, I am very happy because I'm really enjoying it.

Discussion

Even though the design of virtual learning environments and online courses based on accessibility, flexibility, and interactivity and the institutional support enhance learners' inclusion (Burgstahler 2022; Reyes, Meneses, and Xavier 2022), there are also internal factors at play that contribute to their success. Learners with disabilities make use of an

array of internal resources to cope with difficulties including beliefs in oneself (self-efficacy, hope, and sense of coherence), self-determination, self-regulation, self-advocacy, and problem-solving skills. These factors often lead students to use proactive coping strategies, which eventually encourage them to seek social support and companionship when experiencing challenges beyond their ability to handle independently.

Online learning demands higher levels of autonomy, self-management, and proactivity (Xavier and Meneses 2022). These requirements can pose significant challenges, particularly for learners who struggle with physical, sensory, mental, or learning conditions. Therefore, this study reflected how online learners with disabilities used effective problem-solving, self-efficacy, and self-regulation skills when facing academic, emotional, or life-based adversities. The strong level of proactivity we observed among our participants is not evident in other studies conducted with learners who abruptly migrated from face-to-face to online learning motivated by the Covid-19 lockdown (Laslo-Roth, Bareket-Bojmel, and Margalit 2022). Interestingly, even when previous research alerted about the difficulties of some learners to self-advocate and self-organise such as those with ADHD, autism, or other mental health conditions (Miller et al. 2019), in this study these learners effectively coped with psycho-emotional and task-management challenges.

Learners with disabilities often prefer managing issues by themselves to avoid prejudice and stigma as suggested in Bell et al. (2017), Melian and Meneses (2022), and Wilkie (2023). We have observed a prominent display of proactivity, courage, and self-efficacy among the participants, which appear to be crucial to promote their perseverance and academic achievements. Various factors, including maturity, life

goals, personal fulfilment, and prior experiences, may explain these behaviours. Firstly, the participants are aged over 25 years, a stage in life often associated with increased maturity and ability to use more resources for effectively handling challenging situations (Staddon, 2020). Secondly, their clear and well-defined life goals usually serve as guiding encouragement, motivating them to actively seek solutions to encountered problems in pursuit of their aspirations. The pursuit of personal fulfilment is also deemed influential in their approach. Lastly, these learners have encountered diverse challenges in their academic trajectory, which, in turn, have improved their problem-solving skills, enabling them to effortlessly navigate and overcome difficulties encountered in online higher education.

Learners with disabilities usually turn to social and academic support to handle learning and emotion-based difficulties (Laslo-Roth, Bareket-Bojmel, and Margalit 2022; Chadwick 2022; Bell et al. 2017). These learners try to go unnoticed, but when they truly need support, they disclose their condition to the academic and administrative staff which often results in receiving the necessary support. But the lack of understanding of their situation dissuades their attempts to seek institutional support. Moreover, while it is true that accepting their condition and disclosing it to faculty and administrative staff, and sometimes to peers, seem to be a mechanism to cope with adversities, it may also give rise to other issues. For instance, it can be interpreted as they are looking for a differentiated treatment and the chances to be stigmatised increase (Bell et al., 2017). Hence, it is crucial to strengthen the awareness of diversity among university stakeholders to foster a friendly and welcoming learning climate in which learners can participate and get support without having to beg or justify their needs.

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Learners with disabilities show strong qualities such as self-determination, courage, self-efficacy, and resilience that lead them to be successful (Sharabi, Sade, and Margalit 2016; Wilke et al. 2023). But beyond highlighting how resilient they are, we would like to emphasise the importance of hearing their voices to have a better understanding of how to promote the inclusion of diversity in higher education. As these learners have expressed, they are not impermeable against all the difficulties that online learning may entail for them. Consequently, it is always useful to provide suitable companionship so they can rely on someone else in the university to address their challenges. Cultivating awareness and understanding of disability would greatly enhance the relationship between faculty and administrative staff and learners with different educational needs. Sometimes, it is not necessary to make huge efforts but just contact them more often, ask about their needs, and accompany them to find a solution of the difficulties encountered.

Our results also suggest that training on managing online learning challenges would enhance learners' chances of persistence and academic success. Supporting learners on improving their self-regulation and executive functions skills is crucial in online learning to guarantee their inclusion (Chatzara, Karagiannidis, and Stamatis 2016). This type of support should be addressed to all learners given that online learning challenges also affects those without disabilities. Rao et al. (2021) explain a big array of actions based on universal design for learning that professors, course designers, and student services may consider to enhancing learners' affective and strategic skills.

Limitations and recommendations for future research

Our understandings are limited to the perspectives of the successful students, potentially

introducing a bias in the outcomes so that the analysis is only based on effective coping strategies. In this regard, it is advisable to complement our results with more investigations on the experiences of students who dropped out of online higher education, thus reflecting on how they coped and if their strategies have a link with withdrawing their studies. In any case, given that learners with disabilities is a hard-to-reach student body, we acknowledge the increased challenge in contacting those who dropped out. One more theme to consider is the context in which we conducted the study. As our results focus on the experiences of learners with disabilities in a fully online and asynchronous educational model, more research needs to be done in other online learning environments to observe the role of the learning model on learners' challenges and coping strategies.

We also reflected on the general population of learners with disabilities, which is useful not only because it enabled us to have a broader and complete insight into their experiences, but also because it led to avoid stereotyping and labelling based on specific types of disabilities. However, we bear in mind that disability is a multidimensional phenomenon and therefore there could be people who do not feel represented in our findings. Given the variability of profiles within our participants, our results should be complemented with more investigations using a more representative approach to identify the differences and similarities within the entire population. Finally, variables such as age, care responsibilities, and severity of disability were only briefly addressed in our analysis while others such as gender, social background, or ethnicity were not considered. Further research examining the intersection of these variables would provide a more comprehensive understanding of the situation, considering that certain

learners might encounter heightened difficulties.

Implications for practice

Even though our intention was not to use the experiences of our participants as inspiration for other learners, our findings suggest the design of support strategies based on promoting self-efficacy, problem-solving, executive functions, and self-regulation among online learners in general. As shown in this study and other investigations, online learning requires higher autonomy and proactivity than other educational modalities, hence institutions should prepare learners to cope with online higher education challenges.

This study contextualised the reality of learners with different types of disabilities in online learning and then highlighted the priorities on which practitioners could focus to guarantee their inclusion. Our results stress the importance of raising awareness and understanding towards disability, which involves demonstrating empathy to learners' situations and establishing conditions that enable their inclusion. This means that faculty and administrative staff should bear in mind that learners with any educational need might be unnoticed in their classrooms and so they should be prepared to offer suitable and timely support for everyone.

Conclusion

This study showed that online learners with disabilities' coping strategies focus mostly on proactivity. These learners rely on internal factors as the foundation for overcoming online learning academic and emotional challenges, as well as other critical moments

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and life events. Educational stakeholders should take into account learners' experiences and needs to propose improvements in the support systems of online universities. For instance, enhancing learners' autonomy, which includes fostering problem-solving skills, executive functions, self-regulation, and self-efficacy, would significantly promote the inclusion of students with diverse educational needs in online higher education. Therefore, in addition to designing accessible courses and promoting support mechanisms, institutions must provide tools and resources that facilitate learners' coping skills.

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Table 1. Participants' demographics

Stage of study	Participant	Age	Condition	Employment status	Family/marital status	Discipline of study
First-year students	Mary	40	Hard of hearing	Employed / Full time	Single	Fine arts
	Anna	54	Hard of hearing	Employed / Full time	Married (adult children)	Humanities
	Tatyana	37	Chronic illness	Employed / Full time	Married (no children)	Humanities
	Olga	33	Chronic illness	Pensioner	Married (no children but caregiver)	Economics and businesses
	David	40	Dyslexia	Employed / Full time	Married (no children)	Engineering and technology
	Elena	22	Dyslexia	Employed / Part time	Single	Psychology
	Andy	45	Bipolar disorder	Pensioner	Married (dependent children)	Engineering and technology
	Robert	40	Psychotic disorder	Pensioner	Single (caregiver)	Psychology
Intermediate students	Daniel	34	Vision impairment and hard of hearing	Pensioner	Single	Psychology
	Ivan	47	Speech impairment	Employed / Full time	Single	Humanities
	Alexander	39	Physical impairment	Unemployed	Single (caregiver)	Engineering
	Andrea	51	Chronic fatigue and fibromyalgia	Pensioner	Married (dependent children)	Humanities
	Marina	37	Dyslexia	Unemployed	Single	Fine arts
	Monika	26	ADHD	Employed / Part time	Single	Psychology
	Christine	39	Depression	Pensioner	Single	Humanities
	Oscar	42	Psychotic and Behavioural disorder	Employed / Part time	Single	Engineering and technology
Senior students	Paul	57	Vision impairment	Pensioner	Single	Humanities
	Sara	51	Hard of hearing	Employed / Freelance	Single	Psychology
	Denis	40	Physical impairment	Employed / Full time	Married (dependent children)	Engineering and technology
	Nicole	54	Dyslexia and ADHD	Employed / Full time	Married (dependent children)	Economics and businesses
	Christian	45	Physical impairment and dyslexia	Employed / Full time	Married (adult children)	Social sciences
	Vera	25	Dyslexia and ADHD	Employed / Part time	With partner	Psychology

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	Michel	45	Psychotic disorder	Pensioner	With partner	Engineering and technology
	Rosa	41	Depression	Pensioner	Married (no children)	Humanities