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ONLINE LEARNING AND INVISIBLE DISABILITY: EXPLORING GREEK EFL STUDENTS' EXPERIENCES

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Abstract:
The bulk of research on students with learning disabilities during university has focused on face-to-face mode on campus. Less is known regarding the learning experiences of these students online. This qualitative work aims to explore the online educational experiences among Greek undergraduate EFL students with learning disabilities and/or ADHD during the Covid-19 shutdown. Data were collected via in-depth interviews with seven undergraduate students with LD and/or ADHD from two different higher education institutions in Greece. Interviews focused on the difficulties participants encountered during the three online academic semesters in 2020-2021. Data were analysed using IPA. Findings revealed students encountered severe difficulties that hindered their academic progress both in EFL and in core subject courses but there also were affordances that facilitated their learning.

Keywords: learning disabilities, online education, EFL, technology, accommodations, Covid-19

1. Introduction

The Covid-19 pandemic triggered a global crisis during which schools and universities were forced to switch to remote mode overnight. In Greece, higher education institutions (HEIs) remained online by law from March 2020 to September 2021. Overall, Greek HEIs were able to switch online quickly and efficiently and this rapid and smooth transition initially triggered positive feelings in students and reduced their anxiety regarding the completion of their academic studies. Nevertheless, the subsequent prolonged period of social distancing caused a series of negative effects on Greek university students' psychology including higher levels of depression, anxiety and decreased participation in online lessons (Giannoulas et al., 2021; Kaparounaki et al., 2020; Kokkinos et al., 2022; Patsali et al., 2020; Sazakli et al., 2021). The majority of online courses in Greece during

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the pandemic were realized through live lectures via Zoom, Webex, or Microsoft Teams with students watching passively (Kokkinos et al., 2022). Relevant research for students with LD and/or ADHD within the Greek higher education context is scarce yet findings from studies elsewhere have revealed that for LD/ADHD students this transition was actually rougher and more stressful despite the fact that HEIs provided online accommodations (Laslo-Roth et al., 2022; Manase 2021; Zhang et al., 2022). The present work aims to contribute to filling this gap by shedding light on the experiences of Greek engineering students with LD and/or ADHD who were not provided with appropriate accommodations even before the pandemic (Vlachou & Papaioannou, 2018). More specifically, the primary question of the current work was:

- How did Greek undergraduate EFL students with LD and/or ADHD experience online education during the COVID-19 shutdown?

1.1. Learning disabilities, online learning and self-regulation

Learning disabilities and ADHD are frequently investigated together in higher education research due to their high statistical prevalence and their high comorbidity rates as they often co-occur in the student population (Gnanavel et al., 2019). Learning disabilities (LD) constitute an umbrella term for specific disorders that in some way prohibit one's learning process despite the fact he/she has average or above average cognitive capacity. These disorders directly affect language skills such as reading, writing, speaking, listening, and other skills such as reasoning and mathematical thinking. ADHD is related to a form of inattention and/or hyperactivity accompanied by impulsive behaviour (Gnanavel et al., 2019). University students with LD and/or ADHD often encounter academic, social, and emotional difficulties triggered by their disorders both in traditional and online learning environments (Laslo-Roth et al., 2022; Manase 2021; Zhang et al., 2022). Regarding online learning in particular, findings from works during the Covid-19 pandemic have shown that LD and/or ADHD students experienced struggles related to maintaining their self-regulation and engagement during their daily online educational activities yet there also were aspects they found helpful and comforting (Laslo-Roth et al., 2022; Manase, 2021; Zhang et al., 2022).

Self-regulation in learning refers to a set of learning strategies students utilize to learn (Zimmerman & Moylan, 2009). Although self-regulated learning has been theorized in multiple diverse forms in the relevant literature, overall researchers agree that it involves specific strategies, namely goal setting, monitoring, and evaluating. In Zimmerman's famous SR model, learning emerges in three cyclical stages: forethought, performance, and self-reflection (Zimmerman & Moylan, 2009). Initially, students are in the forethought phase where they are engaging with task analysis. At this point, they deliberately set specific goals and use planning strategies before starting to work on the task. Subsequently, students enter the performance phase where they execute their plans and simultaneously monitor themselves and control their cognition. In the evaluation or self-reflection phase, students critically examine their progress based on their cognitive self-monitoring as well as the feedback they are provided by teachers or classmates. At this point, they explicate their thoughts, reflect on their goal and planning strategies, and

utilize this valuable data to construct novice goals (Zimmerman & Moylan, 2009). Findings suggest that students with learning disabilities and/or ADHD face self-regulation struggles yet their ability to control their thinking and behaviors is linked to emotional, social, and cognitive outcomes throughout their lives (Gudjonsson et al., 2009). Recent findings suggest social difficulties are partly related to emotion dysregulation, thus students with learning disabilities and/or ADHD may experience higher levels of stress or fatigue compared to their neurotypical counterparts (Sibley et al., 2021), particularly in online environments. Supporting students with self-regulation struggles implies utilizing teaching strategies and methods that facilitate motivation and emotion regulation. This motivational scaffolding demands educators to not only trigger but also sustain students' concentration on a task, by empowering and actively engaging them using new technologies (Cibrian et al., 2022).

Regarding STEM undergraduates who are the focus of this work, findings have shown that during the pandemic, students with LD and/or ADHD struggled to adjust to their new online academic routine and stay focused for long hours to comprehend difficult science content. Additionally, LD/ADHD students frequently failed to receive the accommodations offered by their respective institutions such as extra testing time, flexible assignment deadlines, flexible classes/lab attendance, online note-taking services, and close captioning of video lectures, due to instructor negligence or students' reluctance to ask for them (Pfeifer et al., 2020; Pfeifer, et al., 2021). In fact, previous works within the STEM field suggest that even pro-covid, LD, and/or ADHD students opted not to disclose their disabilities probably due to a lack of advocacy skills and a constant stigma-triggered fear they will be perceived as "stupid" or "problematic" (Pfeifer et al., 2021).

2. Method

2.1 Research design and participants

The present work adopted a qualitative design. Student participants were seven third-year- and fourth-year students, who studied towards their engineering diploma from three different engineering sub-disciplines from two HEIs which are not mentioned for confidentiality purposes. Five of them identified themselves as males and two of them as females. Participants were all in their early twenties and had been officially diagnosed with LD and/or ADHD in primary school. None of them had officially disclosed to their respective institutions. The author was their instructor during Covid-19 and she was aware of their conditions. They were purposefully selected and contacted by the author in person. Those who were willing to participate were asked to provide informed consent. Interviews were conducted in the author's office during the spring semester of 2022. Interviews were recorded and transcribed but all files were erased right after full transcription and coding.

2.2. Data analysis

Analysis was based on IPA (Pietkiewicz & Smith, 2014) as it is suitable for investigating in-depth the views and perceptions of an individual. Interview transcripts were analyzed by the author and another experienced researcher in the LD field. The first stage of analysis involved reading the transcripts multiple times and noting down reflections and observations from the interviews. In the next stage, notes and comments were converted into themes, and in the final stage, based on the similarities found across participants' accounts, themes were clustered in categories with specific descriptive labels.

3. Findings

The results from interviews highlight how remote mode during the pandemic hindered and/or facilitated the learning processes of engineering students with LD and/or ADHD. Data analysis revealed seven emerging themes related mainly to obstacles but a few benefits were also identified across participants' accounts.

3.1 Big Zoom classes, Zoom fatigue and social interaction

Class size and its effect on self-regulation emerged as a major theme from participants' accounts. Big Zoom lectures disturbed engagement which in turn triggered additional barriers to participants' studies as they ended up studying and trying to figure out difficult content on their own without support from professors or peers. Data showed participants thought this wider sense of isolation during big Zoom classes was experienced by all students but believed that in their case their LDs and/or ADHD magnified feelings of alienation and disorientation:

> *"I never believed I'd say this, but it was extremely hard for me to concentrate without other people around me, professors and other students…I was gaming a lot and I couldn't stop it, out of boredom, I was facing out much faster compared to in-person classes. It was the same for all classes, including English."* (P1, ADHD)

> *"I was on Instagram, Facebook, kept feeling hungry, on Viber with my friends…The number of students in Zoom with hundreds of names and black boxes was all demotivating for staying concentrated. I felt like no one was listening so I guess after a point I did the same."* (P3, ADHD and dyslexia)

> *"I felt exhausted after two hours on Zoom, even though I was home all day, doing basically nothing…I still remember this feeling of exhaustion and still can't explain it. I wasn't listening to any teacher, I think. English is a subject I don't like much due to my dyslexia, so it was even worse."* (P4, dyslexia)

Big Zoom classes also prompted feelings of frustration and escalated self-consciousness which prohibited students from asking questions or making comments during online lectures. Participants projected scenarios of hundreds of students and

possibly their friends and family listening to a "stupid" question and making fun of the student who asked it:

> *"All professors including our English teacher, had the camera on, share screening a PowerPoint or writing equations or grammar or whatever for two hours, asking every now and then if we understood what they were saying, a couple of students would answer yes or they would just post an emoticon in the chat and there was this general feeling of boredom and lack of participation…How on earth would I risk asking something? How do I know who was listening? Especially in English, I am embarrassed to ask something in the real class."* (P2, dyslexia)

> *"Some professors were really good and you could see that they tried really hard to encourage us to participate, they were in constant agony to get some sort of interaction. I literally felt sorry for them, my English teacher was one of them, but I couldn't find the courage to answer in front of all the others with their cameras off."* (P3, ADHD and dyslexia)

> *"With so many students in one room, with tons of students with nice accents and grammar not participating, not answering a question, it was essentially prohibitive for me to participate…I am not good in English compared to others and I don't want them to make fun of me. In the real classroom, I can see who is around, in Zoom, I think I would actually have a panic attack if the teacher forced me to answer something."* (P7, ADHD)

3.2 Labs and small classes

Participants thought that the small number of students facilitated their engagement and self-regulation during labs and elective courses. Nevertheless, they all thought that virtual labs were not equivalent to real, hands-on experience:

> *"We were able to participate, it felt more personal, it felt intimate…We were like ten to fifteen people and many of us had the cameras on most of the time, so it felt more comfortable to ask something, even if it was wrong or ask a stupid question, but they were virtual and as an engineer, I wish I had not missed three full semesters of real labs."* (P2, dyslexia)

Other participants mentioned that in small classes or meetings with peers for project work or other assignments, it was easier for them to get distracted as everyone had their cameras and mics on:

> *"It's pretty common for people with ADHD to pay attention to everything else except the thing they have to focus on, so in many instances, I would get absorbed by inspecting someone's living room or focusing on background noises like cars or airplanes."* (P1, ADHD)

> *"In smaller classes, like labs or electives where everybody had their cameras on I used to observe facial expressions, trying to understand what these people were thinking, looking at the details of their clothing, I was trying to guess what they would have for lunch, who are their friends and so on…".* (P3, ADHD and dyslexia)

3.3 Teaching practices

Greek professors, lab assistants, and EAP lecturers in tertiary education settings were forced to move their courses online overnight without any sort of support or training on curricular redesign and participants seemed empathetic towards them and the fact that they did not have time to adopt their courses online at least for the spring semester of 2020. Regarding the following year, however, i.e. the. winter and spring semesters of 2020-2021, some of them appeared more judgmental. Even though they appreciated the fact that specific professors adjusted their teaching practices, others essentially transferred their F2F teaching on Zoom:

> *"There were a couple of professors who intentionally modified their pace and speed, kept repeating everything, recycled everything multiple times because they knew it was hard for us, not just me and other students with LD, for everyone, but the majority did what they used to when we were in-person."* (P4, dyslexia)

Two EAP lecturers and a few professors further made use of metacognitive tasks to scaffold students' learning:

> *"Our English teacher, asked us to write a summary of the lecture and upload it on the platform, initially we were shocked, but then I started doing it and I understood it was very helpful for me to understand if I have understood a difficult academic writing concept."* (P2, dyslexia)

> *"In one course, which is actually a difficult one, the professor asked us to create concept maps for each chapter were finishing. It sounded weird at first, but it is a pretty good strategy to learn something."* (P7, ADHD)

3.4 Recorded lectures

Some participants referred to the professors who also offered their lectures recorded after the students themselves asked for it. For P4 this was one of the reasons he managed to pass these courses during the pandemic:

> *"This was a real accommodation for me and I miss it and I thanked the professors who did it when we returned to F2F mode. I have ADHD, but I also have depression from time to time and it is really hard for me to get up early, so recorded lectures really worked for me."* (P7, ADHD)

Recorded lectures however emerged as an obstacle for two other participants with ADHD who preferred synchronous lectures as the sense that other students were attending the lecture facilitated their self-regulation and helped them stay focused for a longer period:

> *"For me recorded lectures were a disaster, every time I started watching them I ended up going forward and rewind for like ten minutes and then dropped them. I don't know how many times I tried to watch video lectures during that period. Regardless of the subject, from math to English, at least for me, it simply didn't work. I think it's similar to watching a YouTube video. It's a joke, I cannot concentrate."* (P3, ADHD and dyslexia)

3.5 Exams

For three participants, online mid-term and/or final exams and camera anxiety repeatedly hindered their performance in their EFL exams as well as their core engineering courses exams. Two participants attributed their failure to pass specific courses to the online exam mode:

> *"I was experiencing extreme anxiety with the camera on me, especially during exams, this in turn caused me frustration and there were five times during the online semesters where I just left the exam without completing it…I'm paying for it now and this is really bugging me. Covid held me back. They should provide special accommodations for us, similar to the accommodations they offer abroad, I know I have friends studying abroad."* (P3, ADHD and dyslexia)

> *"The majority of my friends were ok, they were stressed but they were able to cope, I couldn't cope, I could not concentrate as I usually do with the camera on me and an invigilator looking at me and with my mic on. It was almost impossible and I failed many difficult courses because of this."* (P1, ADHD and dyslexia)

> *"I know many, many people who loved online exams for several reasons. I didn't. I was stuck in a crowded room with my siblings and my mother in and out and I was supposed to have my mic and my camera on at all times. It was ridiculous. Impossible to concentrate and answer even things I knew and had studied for days."* (P7, ADHD)

3.6 Time and location

Flexibility in terms of time and location was mentioned by three participants as one of the most important benefits of the transition to the online mode. The following extracts further capture the opportunities experienced by students with learning disabilities during online and remote learning:

> *"A lecture that would take 3 hours in-person, took like an hour and a half with no fuss, no people around talking, no stress to get a proper sit…For English especially this totally*

worked for me because I always miss classes when I am under pressure, if I have a project deadline for example, or a midterm. During Covid, I attended all classes." (P2, dyslexia)

"*In terms of time, it really was a blessing for all of our courses. Clicking and finding the professor during office hours for tutoring, or the English teacher for a question was really easy because even if there was a queue in the waiting room, you could do other things, you didn't feel you were wasting your time."* (P7, ADHD)

3.7 Difficult home environment

For two participants working from home was a blessing as they had their own space and all the technical means to fully participate in all academic activities. Most importantly, these students had a quiet environment with roommates or family that fully supported them and facilitated their daily online schedule:

"I loved working at home, I had full support from my parents, no interruptions or noise, food was right there, and no time wasted on housework. I think this was the most productive period in Uni. I literally wasn't wasting time on anything else except studying or relaxing." (P7, ADHD)

"I was lucky, my roommates also were devoted to their studies, everyone was in front of their computers and laptops and we all respected each other, we are in the same department which is extremely demanding even in English…I struggle in English and during that period my roommates helped me a lot to write the assignments and do well in the finals." (P6, dyslexia)

Conversely, other participants had to deal with loud younger family members, tensions, and other family issues that prohibited them from concentrating on their lectures, labs, assignments, and projects. Privacy concerns and constant worries regarding cameras and mics also emerged as obstacles to engagement in online educational activities. For students with ADHD who struggle with keeping concentrated and focused this was literarily torture:

"Attending lectures online from home was the hardest thing of all. I had no private space, I was in the kitchen, I have a big family with many issues there, so it was practically impossible to stay focused, I cannot stay focused even under normal circumstances, so this was a loose-loose situation." (P3, ADHD, and dyslexia)

"I remember I was constantly worried that my mic was open and they could hear people shouting or that my camera would be on and they could see the chaotic situation in my living room. This is not the ideal environment to understand Logic Design or Linear Algebra or English for anyone and even more so for me." (P1, ADHD and dyslexia)

> *"I don't know why everybody, like the government, the professors assumed we are all rich living in huge mansions with big rooms and private spaces to attend lectures and labs for eight hours or having exams for six-seven hours…I have ADHD and I'm not rich, I was in the same room with my younger siblings who were also online, sharing one laptop, so I don't blame myself, it was impossible for me to properly participate for almost three academic semesters."* (P5, ADHD)

4. Discussion and implications

This work explored the online learning experiences of Greek EFL university students with LD and/or ADHD. Participants' accounts revealed that the shutdown of HEIs during 2020- 2021 and the transition to remote mode in most cases hindered students' learning but there were a few instances where the online mode facilitated their engagement and their self-regulation. It is clear that the transition to online mode during Covid-19 did not affect participants in a horizontal manner. In fact, current engineering LD/ADHD undergraduates in Greece are still paying the price of Covid-19 shutdowns with delayed graduations, and increased anxiety for the theoretical but also the technical hands-on knowledge and skills they missed out. LD/ADHD Greek engineering students from low-income backgrounds faced and still face multiple oppressions related to their multiple marginalized identities as individuals with disabilities but also as individuals from lower socioeconomic backgrounds. The fact that these students were not and still aren't provided with proper accommodations as HEIs in Greece still lack a robust policy and proper support centers (Vlachou & Papananou, 2018) or because they are scared of stigma and refuse to disclose (Seiradakis, 2022; Seiradakis, 2023), is beyond the scope of the present work. Nevertheless, Greek HEIs must implement specific policies and regulations both at the macro-organizational level and at the micro-level to cater to these students' needs regardless of whether the education offered to them is online or in-person. This study emphasizes the significance of taking into consideration students with learning disabilities and ADHD from the onset of designing online courses. Instead of viewing these students as a simple addition to course design, educators should base their courses on universal design principles and create inclusive online learning environments for all.

Conflict of Interest Statement
The author has no conflicts of interest to declare that are relevant to the content of this article.

About the Author
Dr. Emmanouela V. Seiradakis studied in the UK (B.A, M.A, PGDip) and in Greece (PhD). She has been teaching in tertiary education for more than ten years. Her research interests include special and intercultural education and educational technologies.

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